# Connection server

User manual 3.164
2015

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# Connection server

Connection between iNELS BUS system units and another devices.

Connection Server - It serves as a connection between iNELS BUS system units and another devices because it allows communication between devices with different protocols. All devices can be then controlled through just one application. Besides common controlling of electro-installation, you can also control e.g. air condition, home appliances.

Connection server uses small but powerful computer Raspberry Pi with really low consumption with Linux operating system.

**In comparison with iMM Server, multimedia is not implemented here.**

| **Protocols** | |
|---|---|
| RPC | - communication with application smartphones and tablets |
| Elkonet | - communication with central unit iNELS BUS |
| Miele | - communication with home appliances Miele |
| Camcontrol | - communication with IP cams |
| Artea | - communication with air handling unit Atrea |
| Coolmaster | - communication with gateway for air conditioning |
| Airpohoda | - communication with air handling Airpohoda |
| eLAN-RF | - communication with wireless components iNELS RF Control |

# Get started

Commands are given in purple, e.g.: sudo reboot

Notice are given in orange: **Connection server support set only one door intercom.**

Tips and tricks are given in green: In list we can add and remove elements manually

**Important application configuration commands in Linux (are entered in terminal):**

| | |
|---|---|
| ifconfig | - finding IP address of station/server, similar to ipconfig in Windows |
| mount | - command for connection of certain device (CD-ROM, network drive, etc.) |
| umount | - command for disconnection of certain device |
| man | - command is used to format and display the man page for example. man mount |
| sudo shutdown now | - command shut down device Connection server from teminal |
| sudo reboot | - command reboot device Connection server from teminal |

# Putting Connection Server in run

a) Once you unpack Connection server, let the device stabilize at room temperature.

b) Insert attached SD card in the slot.

c) Connect the cabling (do not connect the supply yet):

Display HDMI device
LAN cable for ethernet port
Keyboard to USB port

d) After connecting power suply (adapter with micro USB connector) Connection Server will start automatically.

e) When starting the system you can watch opening of individual services on the screen. Some services do not open, and display FAILD in red; in majority of cases it is not a problem; and has no influence whats over on the run of Connection Server.

f) When start of services is completed, only one line requiring login name will appear on the screen.

Login: imm
Password: imm123

**No characters display when writing a password in terminal**

g) To find IP address after signup use command ifconfig

h) Further settings are performed via web interface iMM Control Center. And display device or keyboard need not be connected for the rest of time. Power supply, micro SD card with system and application and connection to network is sufficient to run Connection Server.

**Never insert or remove the micro SD card for running Server Connection**

# 3.0 Configuration in iMM Control Center - Connection Server

IMM Control Center (the "iMM CC" hereinafter ) is web interface serving for settings iMM clients and iMM servers. iMM CC is activated upon entering the address http://IPADDRESS:8080 in your internet browser.

Login by your password in factory installation is default: "**admin**", password "**imm123**"

If iMM CC does not open, connect via ssh to Connection server and enter type folowing in

command: sudo /etc/init.d/imm-web admin restart .

| | | |
|---|---|---|
| SSH authorization | Login: | imm |
| | Password: | imm123 |

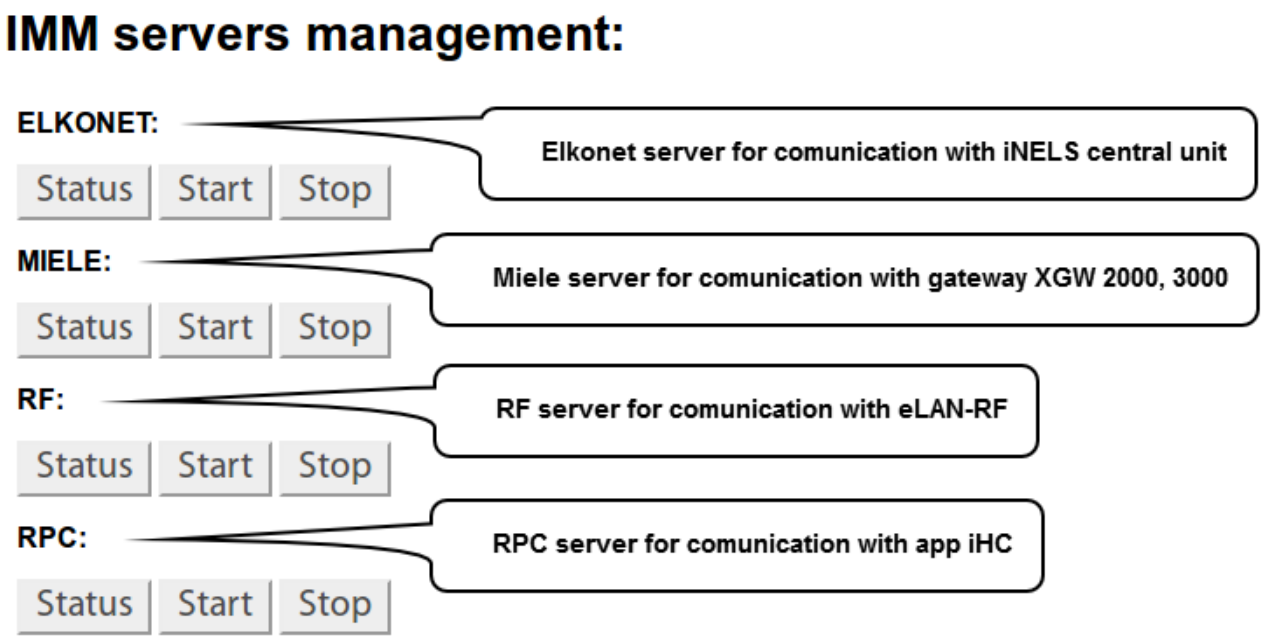
**If you can change Default password in terminal:** passwd imm

Putty is free software whitch can be used to make an SSH connection to iMM CC in windows platform

Website iMM CC will be automatic logout for inactivity after 15 minutes.

# Bookmark Server

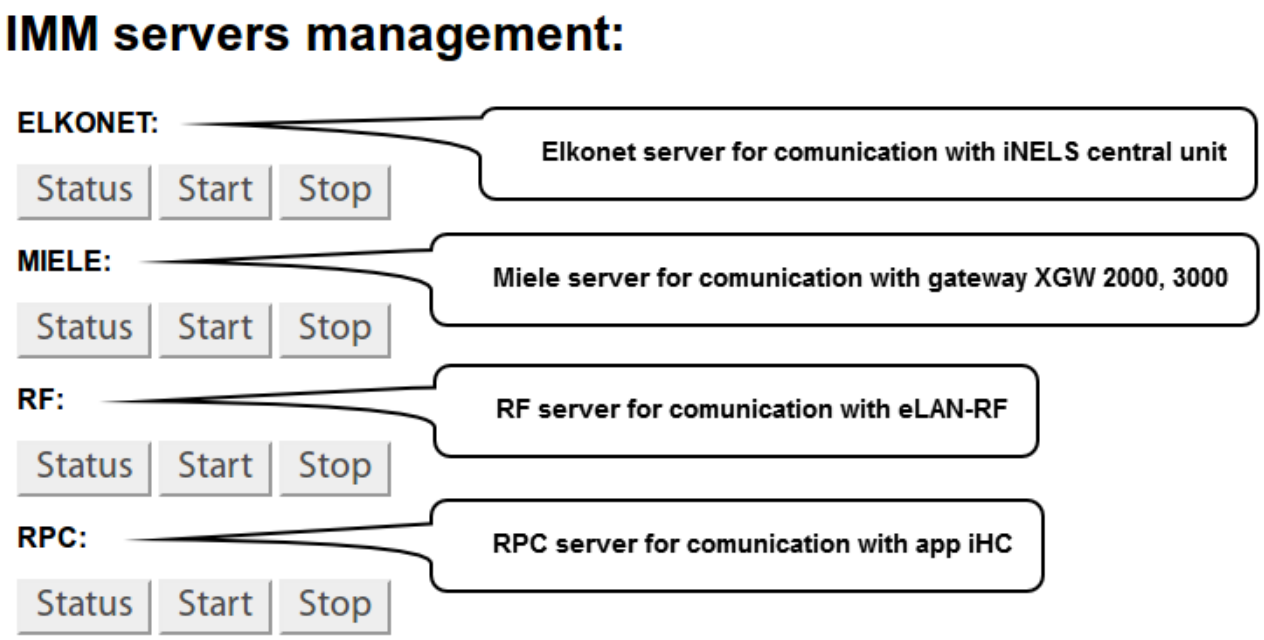
In bookmark **Server** you can control virtual servers (services), which are necessary for comunication with third party. For software diagnostic is possible each virtual server check status, stop or enforce run service.




All virtual servers you can control via Supervisor service link http://IPADDRESS:9001

# iMM servers management

In menu **iMM servers management** we can control the virtual servers running on the server via a web interface. For software diagnostic is possible each virtual server check status, stop or enforce run service.




All virtual servers you can control via Supervisor service link http://IPADDRESS:9001

# Bookmark Configuration

In bookmark **Configuration** is main settings impotrant for propertly function device Connection server. Machine ID and Licence key are preset in factory default.

**IP address format:**

If central unit is behind the NAT or in the other network and routers is possible use port forwarding. You can set port forwarded (on router) to comunication port central unit (CU2 port 61682 ,CU3 port 9999).

| Version CU | Format | Example: |
|---|---|---|
| CU2 | [IPADDRESS]:[COMUNICATION_PORT] | 10.5.15.12:8454 |
| CU3 | [IPADDRESS]:[HTTP_PORT]:[COMUNICATION_PORT] | 10.5.15.12:8080:4562 |

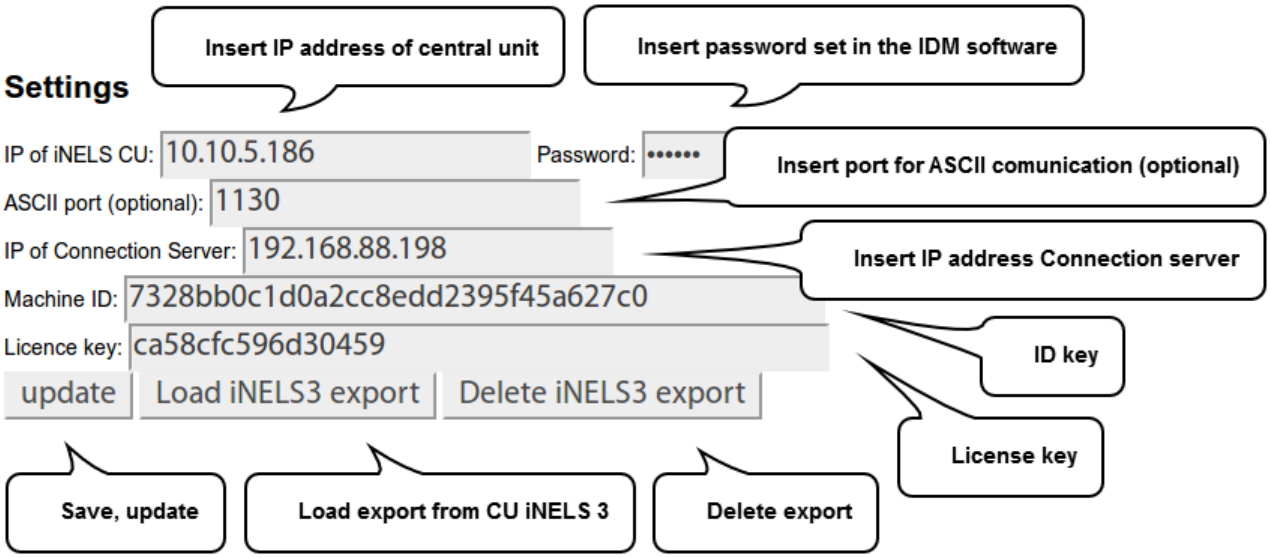
**Communication port** - Elkonet for iMM server, Connection server, App iHC

**HTTP port** - is webserver CU3 with save file export.imm usually http://IPADDRESS/immfiles/export.imm

**ASCI port** - port for comunication CU3 using third-party protocol (telnet) for proper function you must set first port in IDM software (optional)

**Password** - password for acces and control central unit set in IDM software (optional)

**Example setup menu settings:**



# Settings

In the section **Settings** is main settings for setup Connection server whitch are IP address Central unit, server, password and ASCII port. Machine ID and Licence key are preset in factory default.

**IP address format:**

If central unit is behind the NAT or in the other network and routers is possible use port forwarding. You can set port forwarded (on router) to comunication port central unit (CU2 port 61682 ,CU3 port 9999).

| Version CU | Format | Example: |
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| CU2 | [IPADDRESS]:[COMUNICATION_PORT] | 10.5.15.12:8454 |
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| | |
|---|---|
| **Communication port** | - Elkonet for iMM server, Connection server, App iHC |
| **HTTP port** | - is webserver CU3 with save file export.imm usually http://IPADDRESS/immfiles/export.imm |
| **ASCI port** | - port for comunication CU3 using third-party protocol (telnet) for proper function you must set first port in IDM software (optional) |
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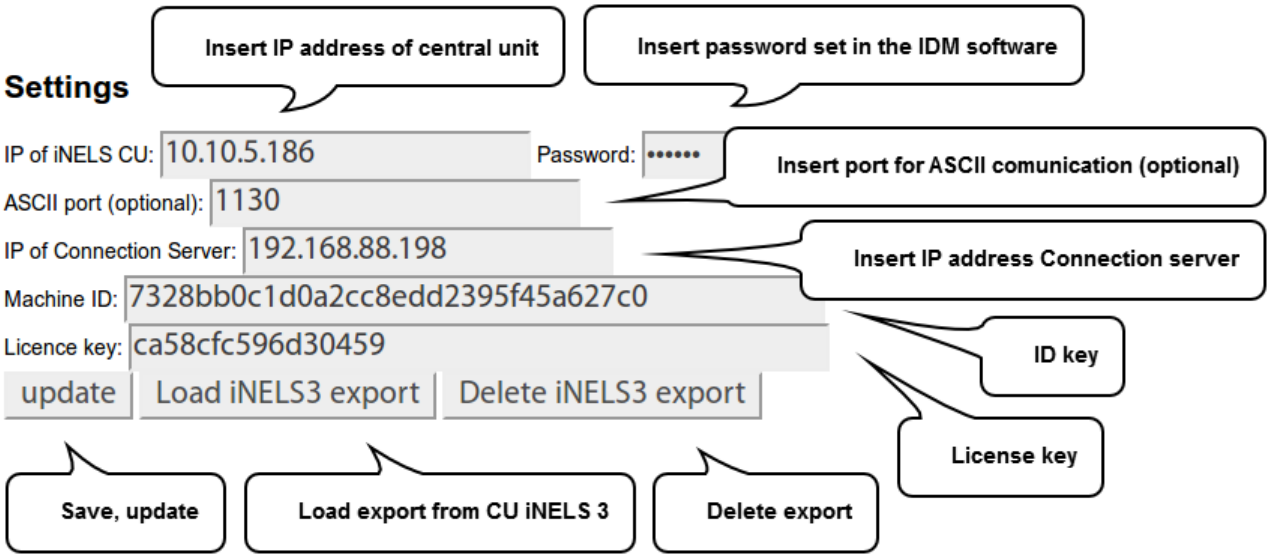
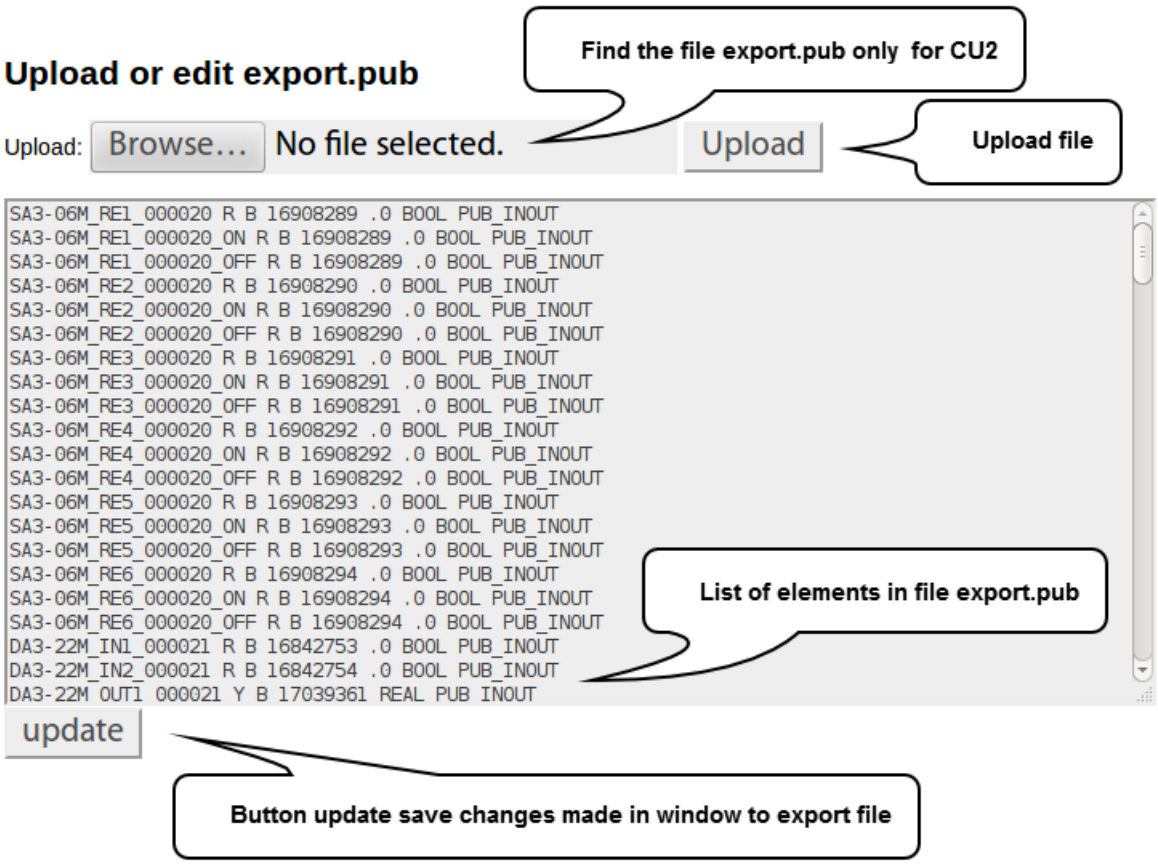
**Example setup menu settings:**



# Upload or edit export.pub

In the section **Upload or edit export.pub** you can upload export.pub file from softare IDM to Connection server and manual edit elements in web browser.


Upload or edit export.pub
Find the file export.pub only for CU2
Upload:
Browse...
No file selected.
Upload
Upload file
SA3-06M_RE1_000020 R B 16908289 .0 BOOL PUB_INOUT
SA3-06M_RE1_000020_ON R B 16908289 .0 BOOL PUB_INOUT
SA3-06M_RE1_000020_OFF R B 16908289 .0 BOOL PUB_INOUT
SA3-06M_RE2_000020 R B 16908290 .0 BOOL PUB_INOUT
SA3-06M_RE2_000020_ON R B 16908290 .0 BOOL PUB_INOUT
SA3-06M_RE2_000020_OFF R B 16908290 .0 BOOL PUB_INOUT
SA3-06M_RE3_000020 R B 16908291 .0 BOOL PUB_INOUT
SA3-06M_RE3_000020_ON R B 16908291 .0 BOOL PUB_INOUT
SA3-06M_RE3_000020_OFF R B 16908291 .0 BOOL PUB_INOUT
SA3-06M_RE4_000020 R B 16908292 .0 BOOL PUB_INOUT
SA3-06M_RE4_000020_ON R B 16908292 .0 BOOL PUB_INOUT
SA3-06M_RE4_000020_OFF R B 16908292 .0 BOOL PUB_INOUT
SA3-06M_RE5_000020 R B 16908293 .0 BOOL PUB_INOUT
SA3-06M_RE5_000020_ON R B 16908293 .0 BOOL PUB_INOUT
SA3-06M_RE5_000020_OFF R B 16908293 .0 BOOL PUB_INOUT
SA3-06M_RE6_000020 R B 16908294 .0 BOOL PUB_INOUT
SA3-06M_RE6_000020_ON R B 16908294 .0 BOOL PUB_INOUT
SA3-06M_RE6_000020_OFF R B 16908294 .0 BOOL PUB_INOUT
DA3-22M_IN1_000021 R B 16842753 .0 BOOL PUB_INOUT
DA3-22M_IN2_000021 R B 16842754 .0 BOOL PUB_INOUT
DA3-22M_OUT1_000021 Y B 17039361 REAL PUB_INOUT
List of elements in file export.pub
update
Button update save changes made in window to export file

**Function for upload export.pub is only for central unit iNELS 2**

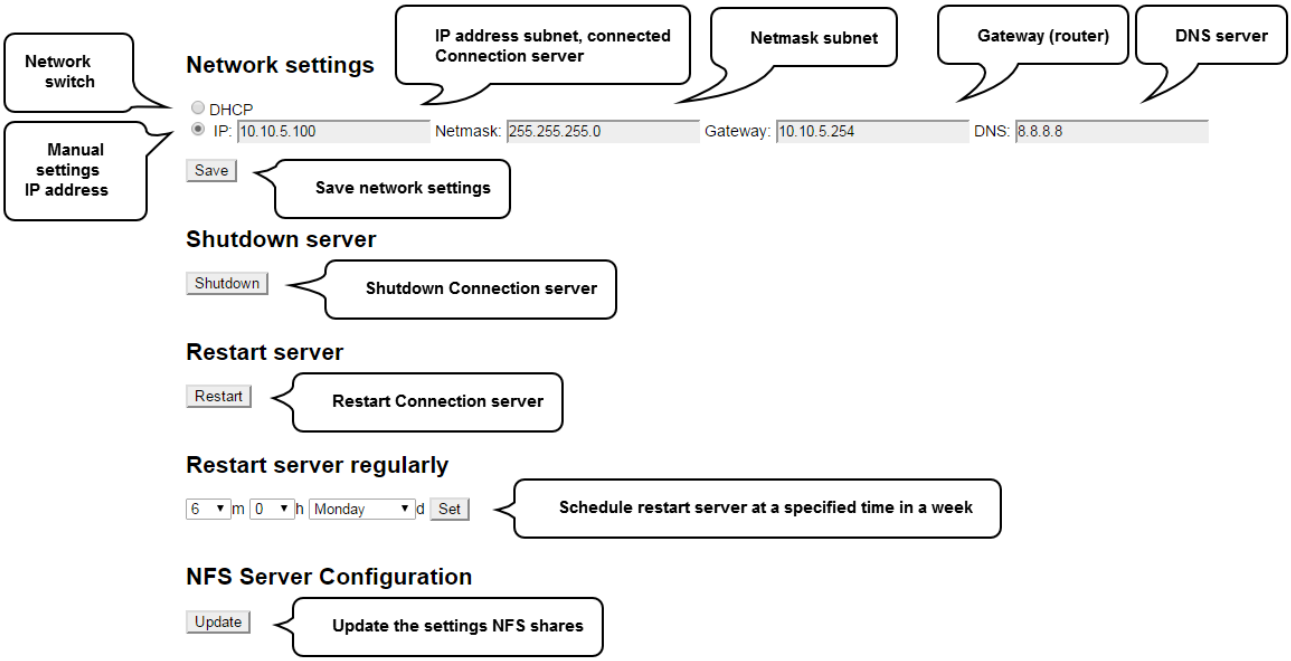
**In the central unit iNELS3 will dowload export automatically when you press Load iNELS 3 export button.**

In list we can add and remove elements manually

# Bookmark System

In bookmark **System** you can configure additional, network settings which will be stored on static IP address. We recommend setting a static IP address for Connection server.

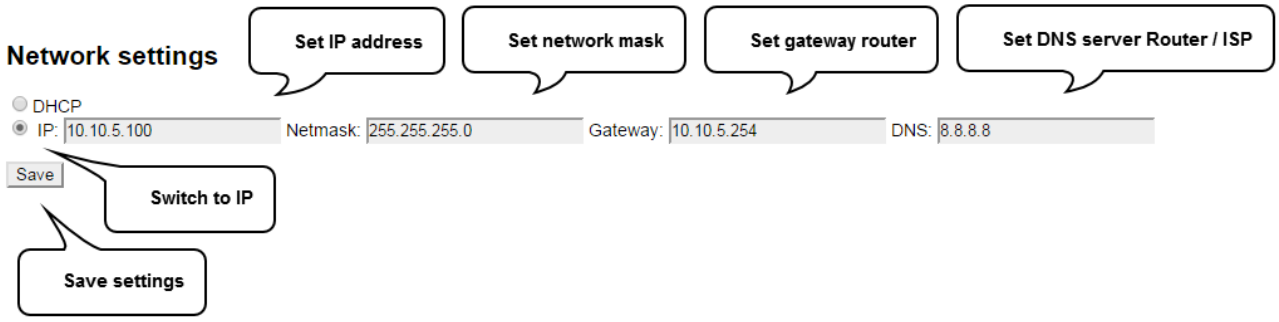
| | |
|---|---|
| Shutdown | - turn off Connection server |
| Restart server | - reboot Connection server |
| Restart server regulary | - schedule restart server at a specified time in a week |
| NFS Server Configuration | - update share settings for Connection server |



# Network settings

In the section **Network settings** you can set IP address manualy as static or dynamically allocate by DHCP server.

**Example setup static IP addres:**

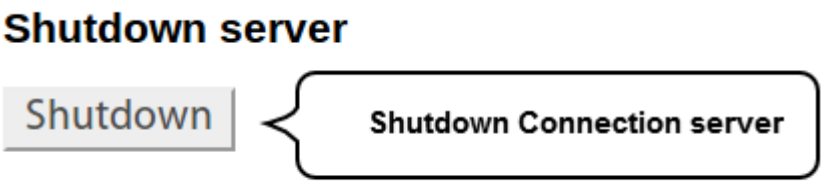



**Set static IP address is recommended for stable use. Information about network settings IP address,** link

If you are using a dynamic IP address from DHCP server set the router to allocate always the same IP addresses based on MAC addresses.

## Shutdown server

Press down **Shutdown** button to power off Connection server from a web interface.




**! For another turn on plug in power connector to Connection server**

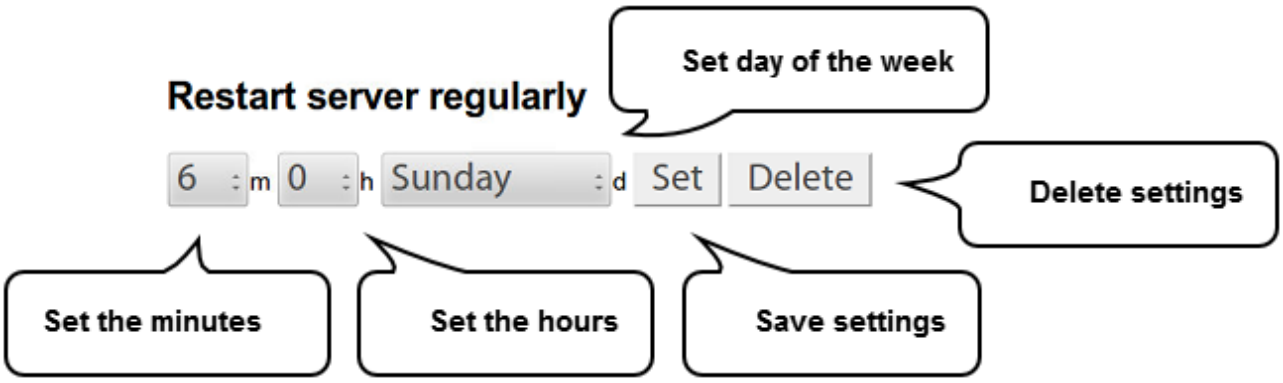
# Restart server

Press down the **Reset** button to restart Connection server from a web interface.

# Restart server regulary

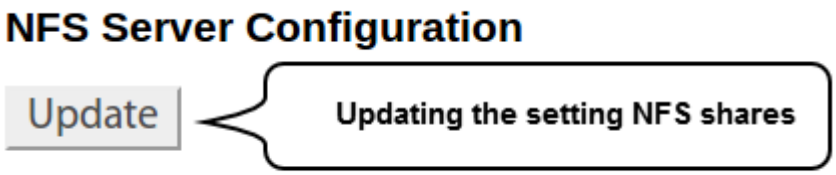
In the section **Restart server regulary** we can setup scheduled restart the server at a specified time in a week.

**Example settings restart server in monday six minut after the midnight.**


Restart server regularly
Set day of the week
6 : m 0 : h Sunday : d Set Delete
Delete settings
Set the minutes
Set the hours
Save settings

## NFS Server configuration

Press down **Update** button to refresh NFS sharing settings in the file /etc/fstab. from a web interface.



# Bookmark HA-BUS

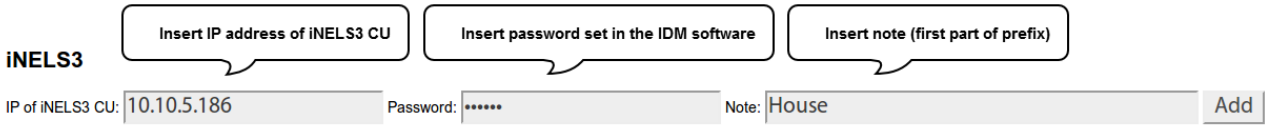
In bookmark **HA-BUS** we can used for interconnection iNELS3 BUS and decentralized control system KNX/EIB, which allows control from iHC app.

Second function to add more iNELS3 central unit.

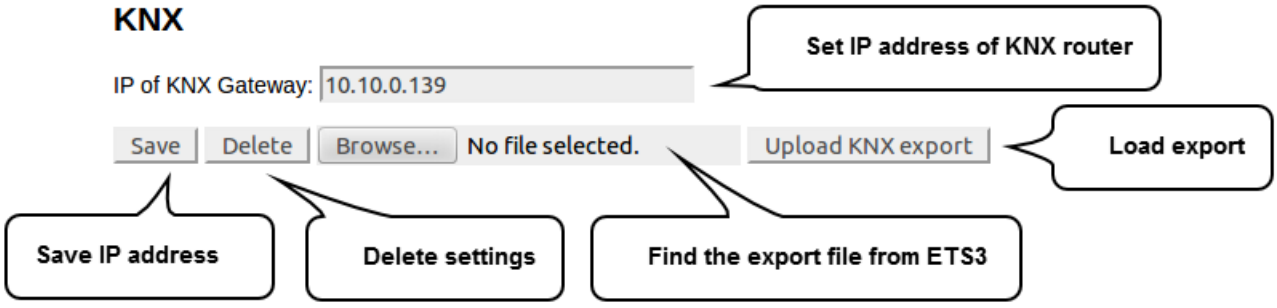
**Requirements for connect with KNX/EIB:** Central unit iNELS or more
Router KNX
Export group address from program ETS3 - 5

**Example connection with iNELS3 CU:**

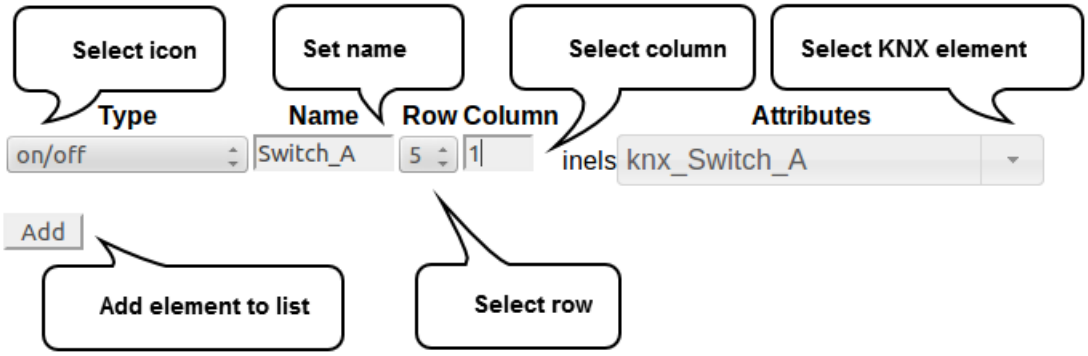
First, enter the IP address of the central unit iNELS3 next fill password (optional) and note to finish press down button Add. After saving the settings will download export from central unit and elements will be added prefix "inels3" last letter (A-H) identify rank.




Fill IP address KNX router and Save button. After save settings was performed put export file group address (see. KNX export group address) and load export to system. Now you can check bookmark Configuration whether the excerpt elements KNX, If yes you go to the tab Rooms and put in a selected room features KNX.



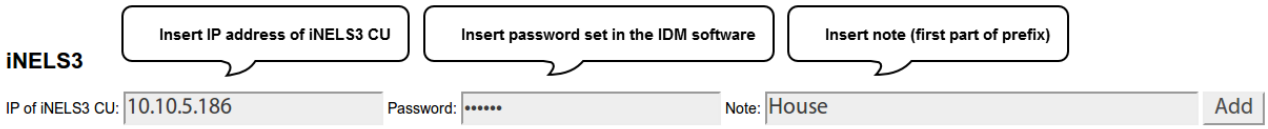
**Example add device KNX to rooms in bookmark Rooms:**

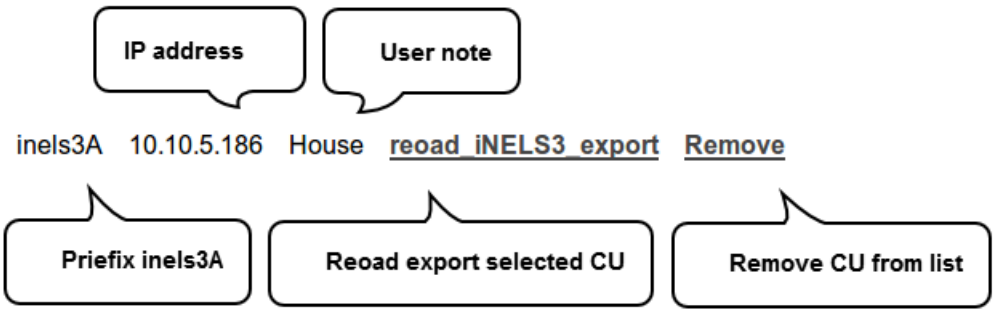



**! This manual does not describe the setting elements KNX only link two systems among themselves.**

# iNELS3

First, enter the IP address of the central unit iNELS3 and Add. After saving the settings will download export from central unit and elements will be added prefix "inels3" last letter (A-H) identify rank.




The prefix consists of two parts first one is **"inels3"** and second **"A"** (last char A-H) distinguishes, letter central unit between themselves.

For correct function with KNX/EIB would have filled a part of the KNX.

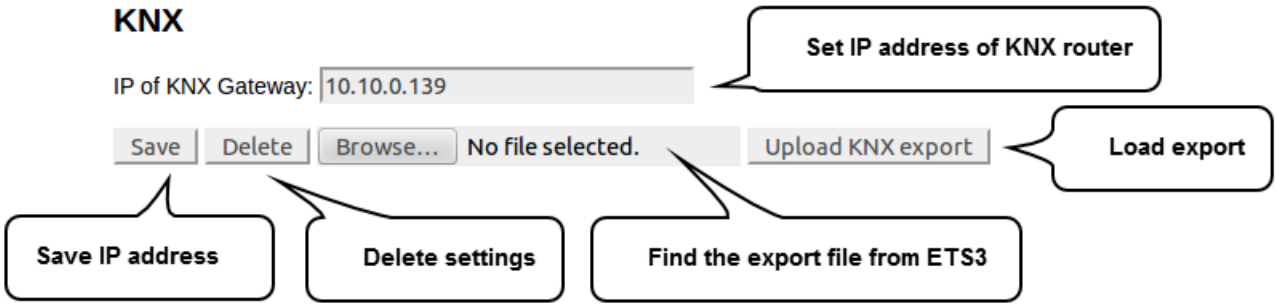
**If the central unit does not have a password set, Password field will be empty.**

Names without prefix in rooms will be converted automatically.

For last hardware revision Raspberry Pi 2 is possible add up to 8 pcs INELS3 central unit.

# KNX

Enter the IP address of the router KNX and press **Save** button. After saving the configuration file we find export group addresses from the program ETS3 and upload KNX exports.

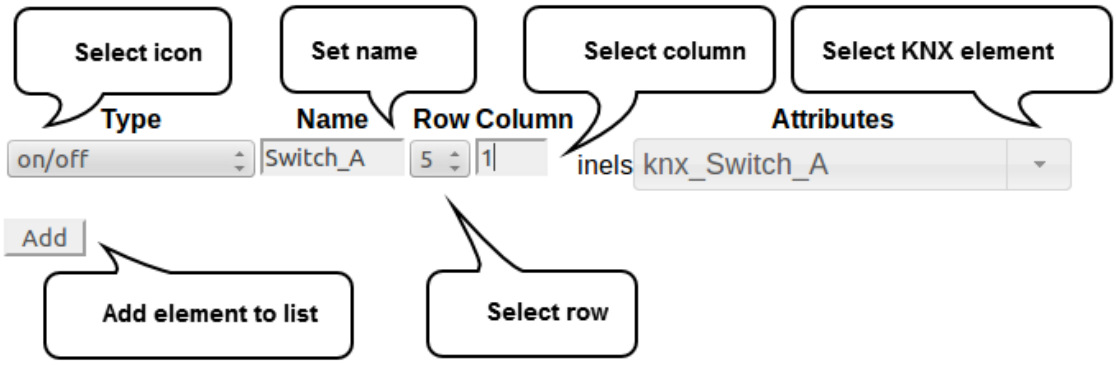



Check Configurations in the bookmark that contains a list of export elements KNX, if so go to bookmarks rooms and put in a selected room features KNX.

# Add KNX element to the Rooms

KNX elements put into a room in the same way as the elements iNELS, KNX recognise by prefixing "knx_".

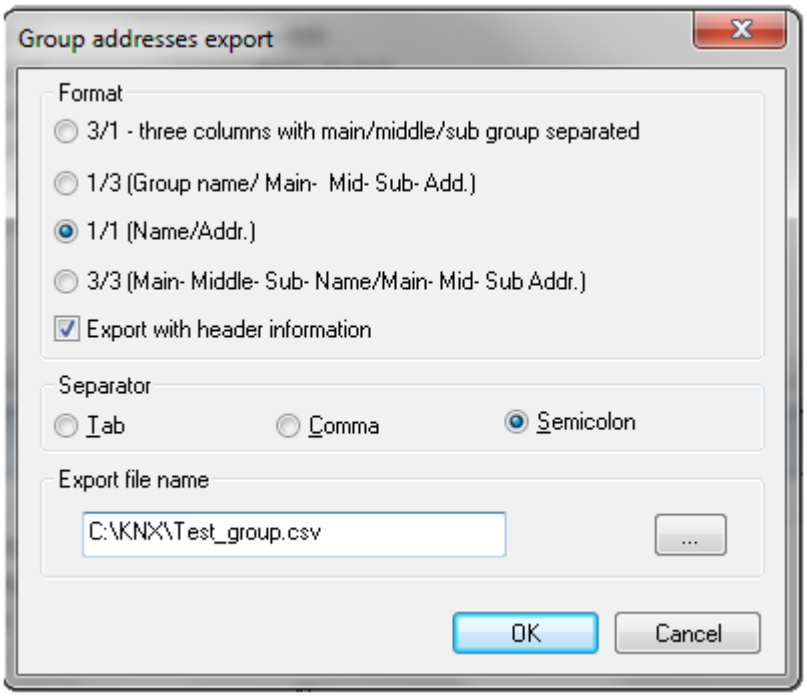
**Example add KNX device to rooms:**



# KNX export group address

Export group addresses to format: 1/1 (Name/Add.) separate semicolon (;) the ETS 3 or higher.

**Example export group addresses from ETS:**




Before inserting the export it need to be more adapted behind the semicolon refill data type according element values (True, False, 0-255, 0-100) see. KNX DPT link

**Example of data in a file supplemented Test_group.cvs:**

"Group name";"Address"
Dimming;0/-/-
New Middle Group;0/0/-
Dim A;0/0/1;5
Dim B;0/0/2;5
Switching;1/-/-
New Middle Group;1/0/-
D;1/0/0;1
switch A;1/0/1;1
switch BCD;1/0/2;1
Shutters;2/-/-
New Middle Group;2/0/-
Shutters1;2/0/1
Shutters2;2/0/2
Sensors;3/-/-
New Middle Group;3/0/-
Temperature;3/0/0;9

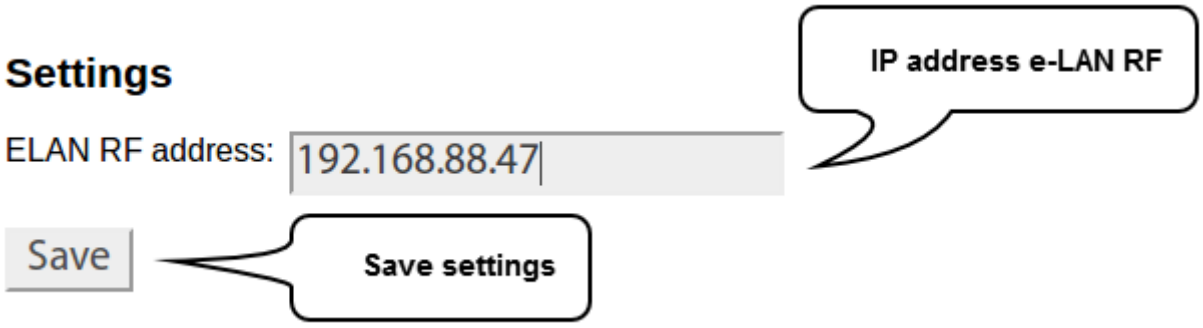
A switch in example; 1/0/1; 1 has value as shown in Table 1 behind a semicon (True, False) means that a switch.

| Data type | Data | Type | Value |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | 1 bit | bool | True \| False |
| 5 | 8 bit | num | 0-255 |
| 5.001 | 8 bit | num | 0-100 |
| 6 | 8 bit | num | -128 +127 |
| 232 | 3 byte | num | RGB [0,0,0] - [255,255,255] |

# Bookmark RF Configuration

Communication between wireless RF devices and Connection server is required smart box eLAN-RF.




To configure the RF devices:

a) The list of supported INELS RF devices

| RF Control actuators divisions | | |
|---|---|---|
| **Switching** | **Dimming** | **Blinds** |
| RFSA-11B | RFDA-11B | RFJA-12B/230V |
| RFSA-6x* | RFDA-71B | RFJA-12B/24V DC |
| RFDAC-71B | RFDAC-71B | |
| RFSAI-61B | RFDEL-71B | |
| RFUS-11 | RFDSC-11 | |
| RFUS-61 | RFDSC-71 | |
| RFSC-11 | | |
| RFSC-61 | | |

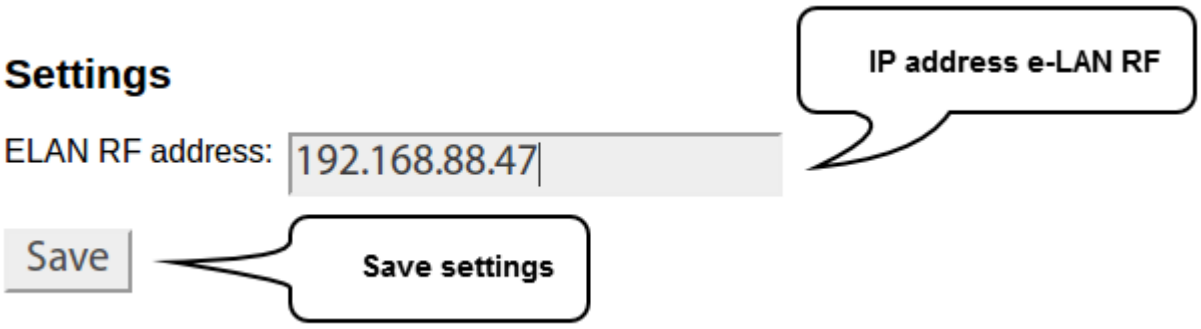
b) Insert elements into Elan RF using a Web interface or application iHC-MARF see. Manual eLAN-RF.

For control RF elements enable in the settings iHC-MA, iHC-TA.

# Settings

For control RF devices in menu **Settings** insert IP address device eLAN-RF, which must already be configured from the web interface or applications IHC-MARF see. manual eLAN-RF.

**Example settings:**



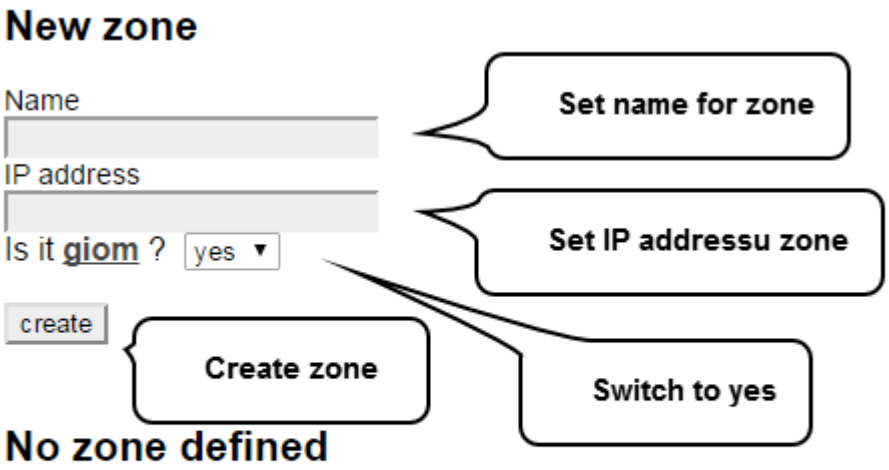
# Bookmark Zones

Bookmark **Zones** is used to configure the zones for Connection server.

**Zone:**

Giom Meteostation: Giom 3000

To insert a fill zone **name, IP address and choose type of zone** change switch to **yes.**




## No zone defined

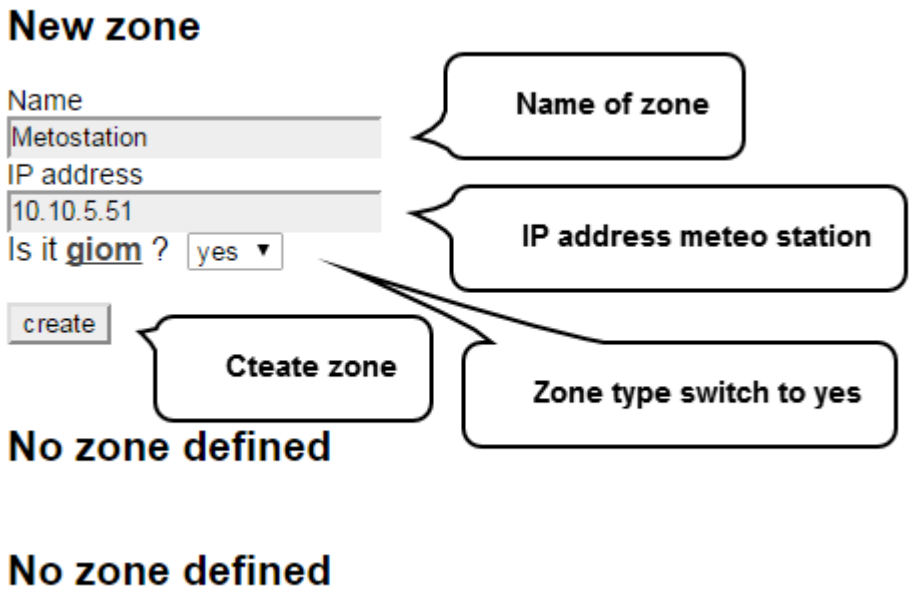
**!Connection Server allows only insert zone meteostation Giom 3000.**

# New zone

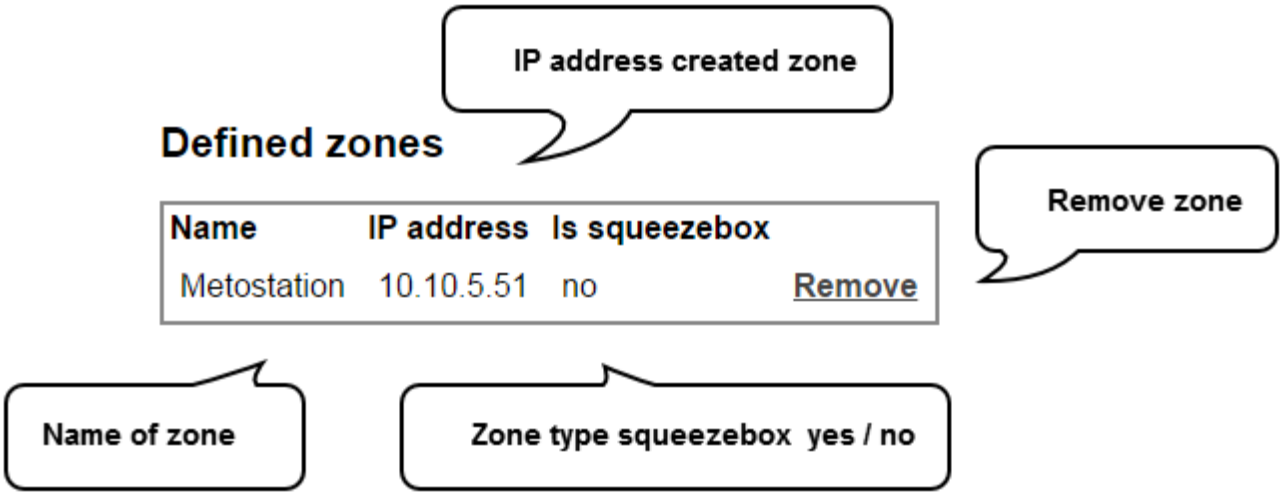
In the section **New Zone**, configure the Connection Server allows you to add only one type of zone.

Giom  Meteostation: Giom 3000

**Example of a zone Giom:**



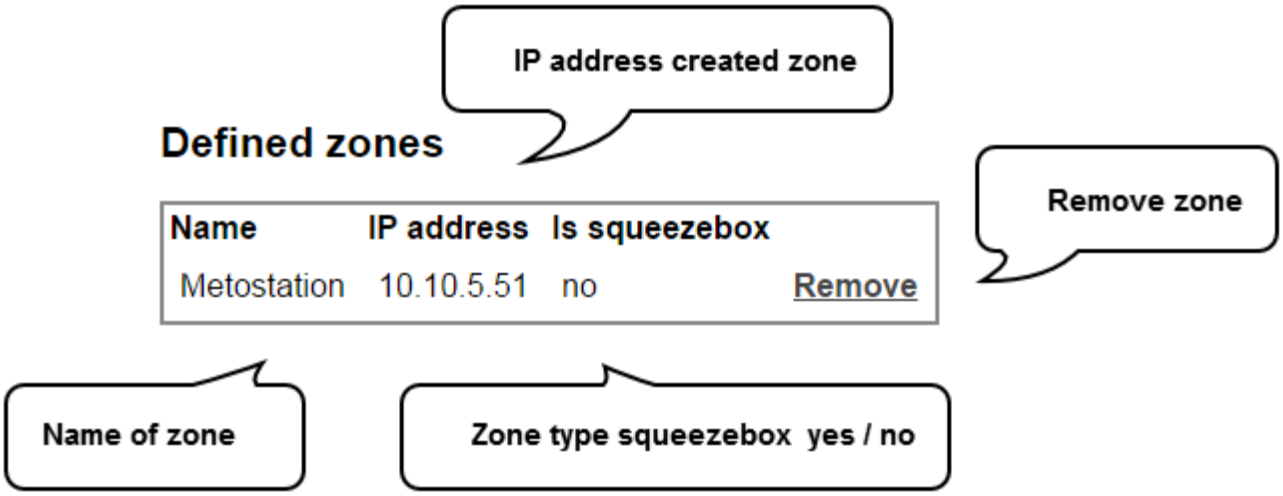

**View already stored zone:**



# Defined zone

In menu **Defined zone** are displayed saved zone.

**Example of the stored zone Giom:**



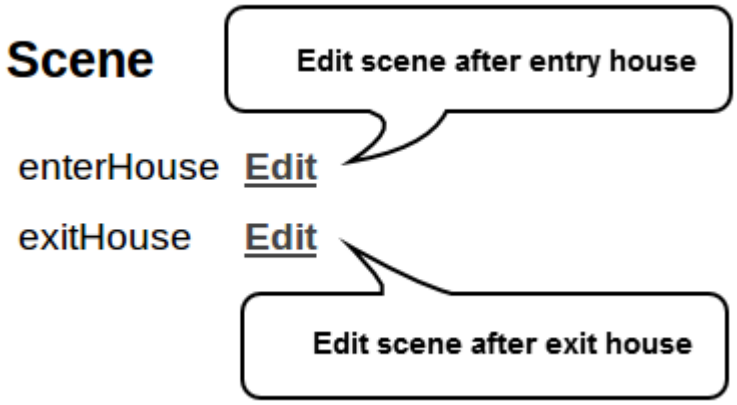
## No zone defined

You do not have any saved zone to create a zone, go to create New zone.

## No zone defined

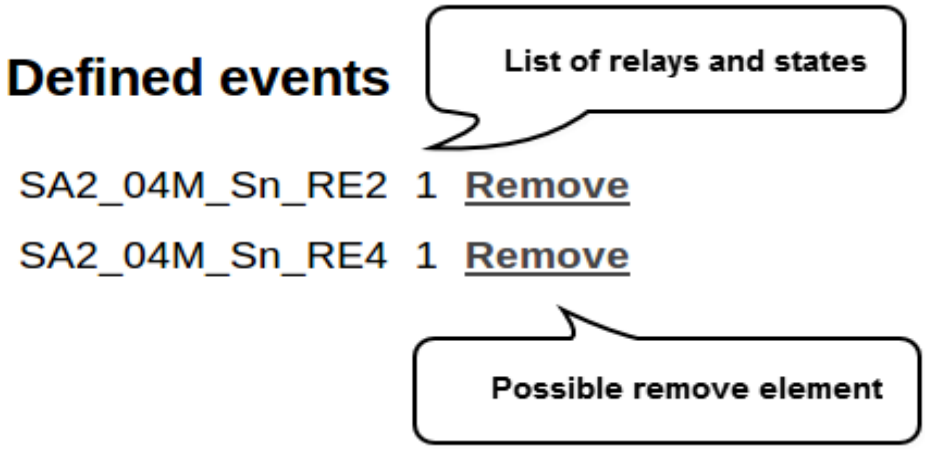
# Bookmark Houses

Bookmark **Houses** is used to configures the scenes when entering or leaving the house. In app iHC-MA is function call "Monitoring arriving home", which recognizes the different technologies that the user is coming to your home and starts the scene enterHouse more datail about this function in manual app iHC-MA.




**Example create a scene enterHouse:**

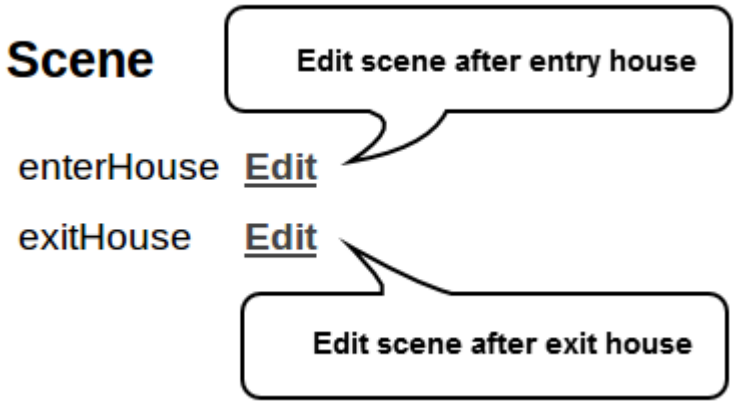
**Saved relays with state in the scene enterHouse:**




! **For proper function must be enabled on your mobile GPS, and Google Location, mobile data and active connection to Connection server.**

# Scene

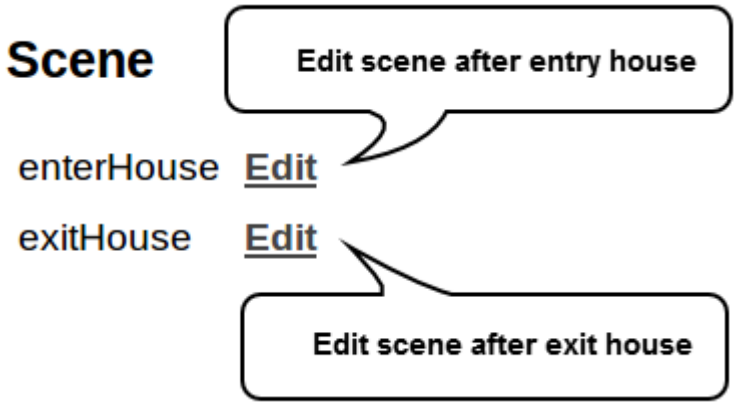
In the section **Scene** configure scene for entering or leaving the house. In app iHC-MA is function call "Monitoring arriving home", which recognizes the different technologies that the user is coming to your home and starts the scene enterHouse more datail about this function in manual app iHC-MA.




**! For proper function must be enabled on your mobile GPS, and Google Location, mobile data and active connection to Connection server.**

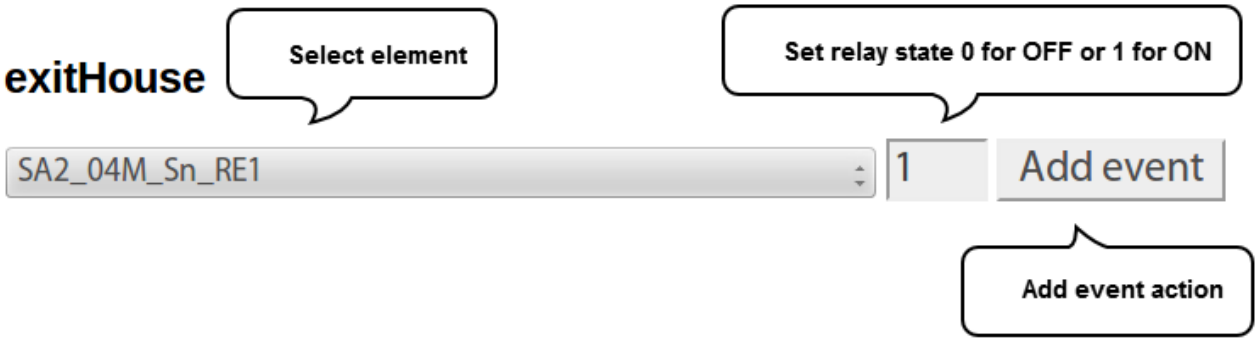
# Edit enterHouse or exitHouse

Edit scene **enterHouse** or **Exit House.**



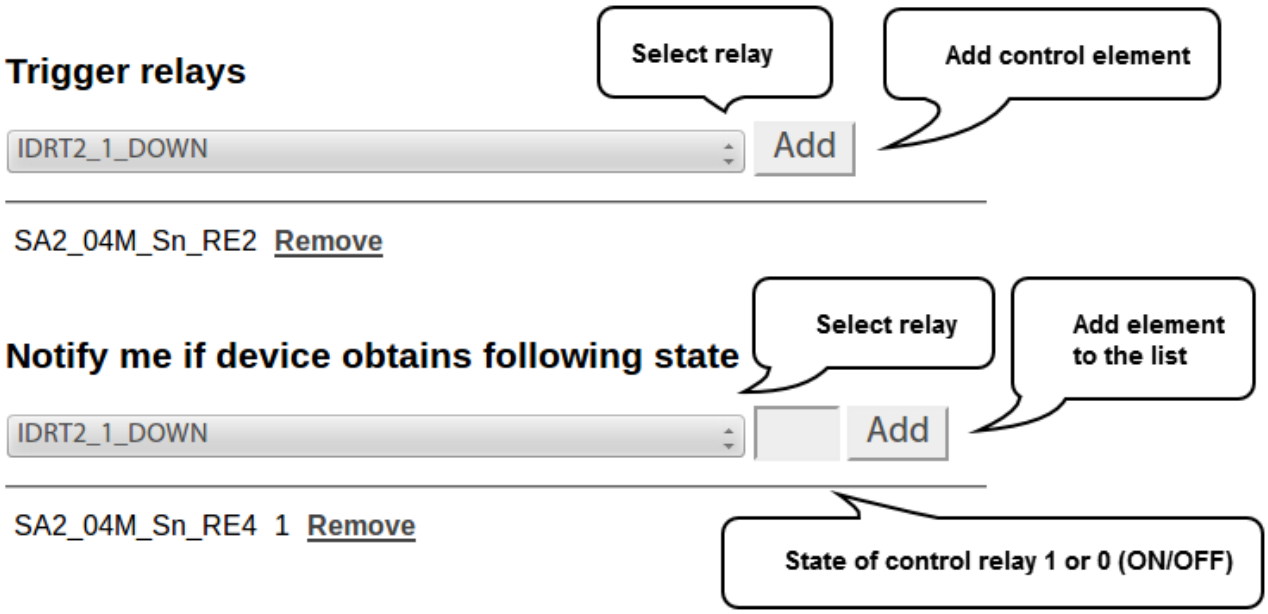

**Example add elemets to scene enterHouse:**

**Example add elemets to scene exitHouse:**



# Security Scan

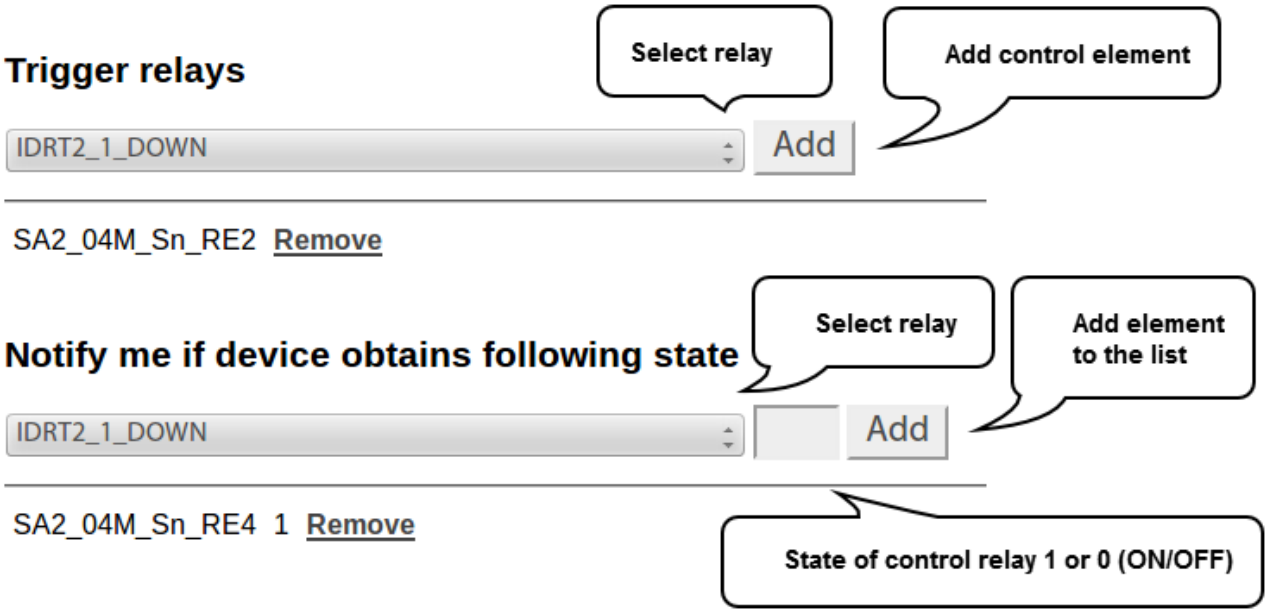
**Security Scan** is a security feature that checks the status of Miele appliances if you are running is displayed in the table Security scan report to all run iHC app. Security scan can be set to monitor the status of selected elements in the house.




**Security function - Security scan not finish in all iHC app.**

# Trigger ralays

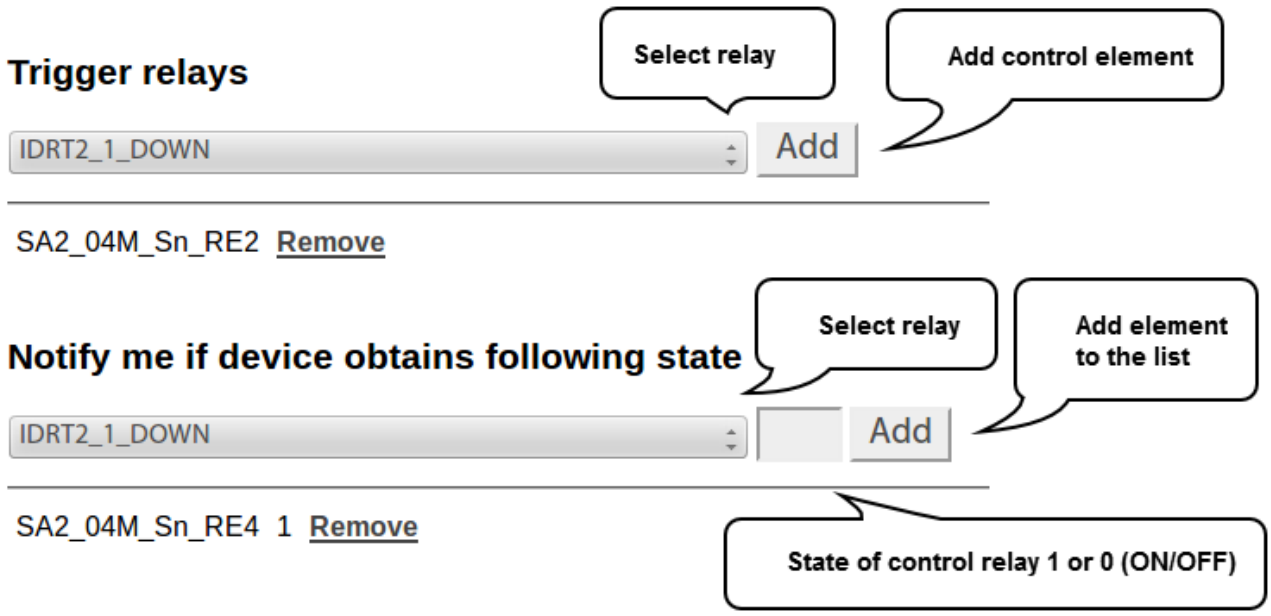
In the section **Trigger relays** is main configuration for security relay for notify about preset states devices and  Miele appliances.



# Notify me if device obtains folowing state

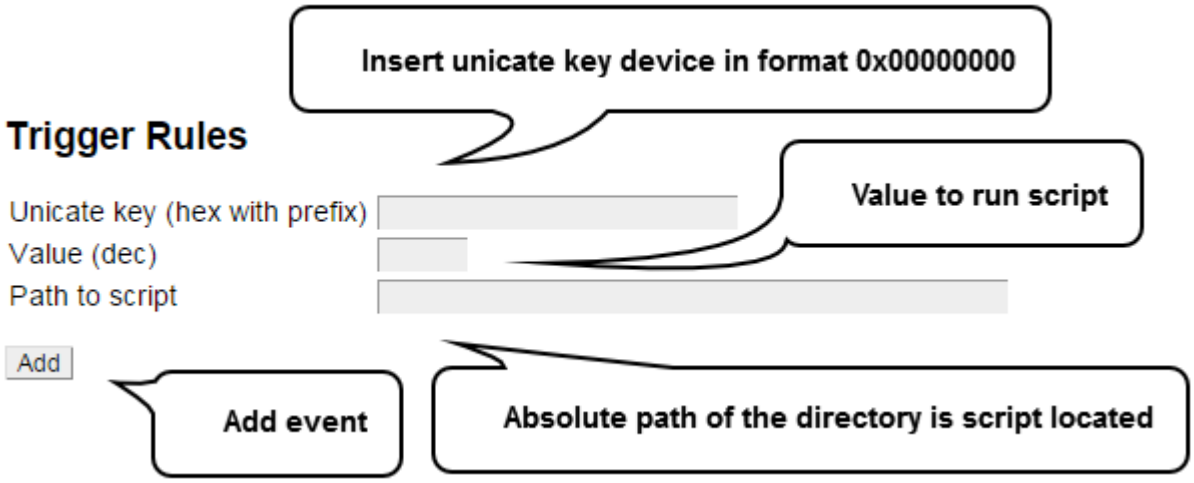
In the section **Notify me if device obtains folowing state** you can set condition monitoring states selected relay.

**Example Security Scan:**



# EventScript

In bookmark **EventScript** creted events based on which the preset start script. The event is performed if the element reaches the set value of the event. You can use different kinds of elements relay, DAC. etc..

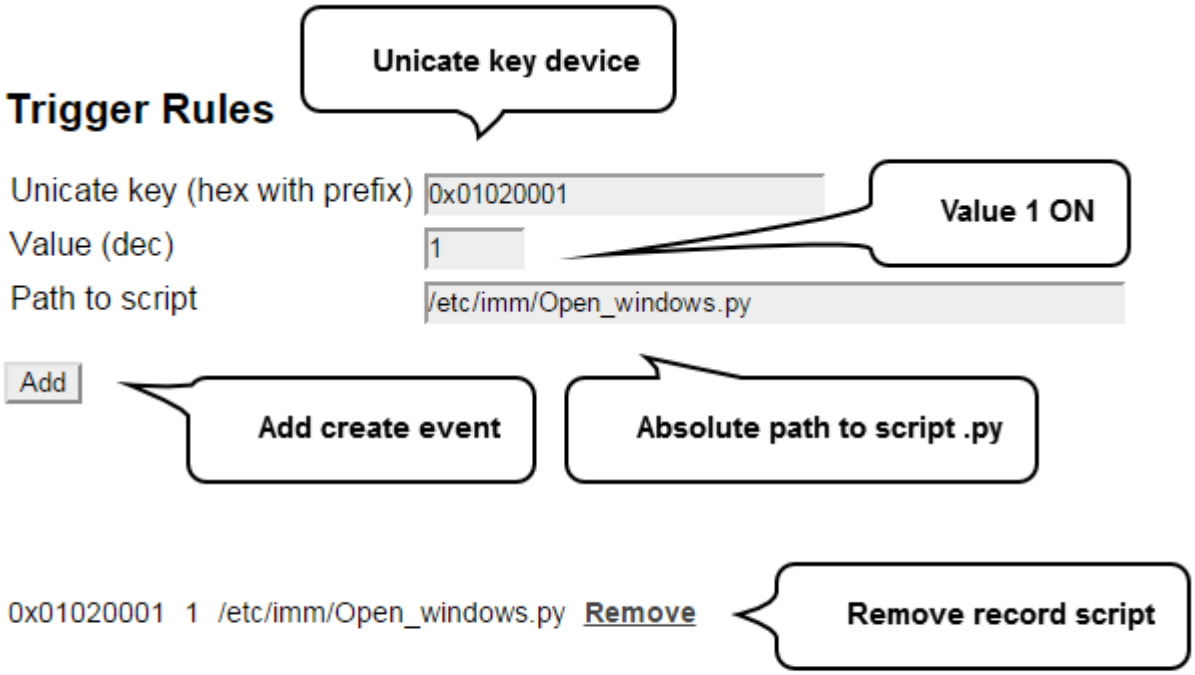



**EventScript use ASCII protocol, whitch must be turn on in IDM program to free port and in bookmark Configuration in iMM CC insert ASCII port for comunication.**

# Trigger Rules

In the section **Tringer Rules** you can create event based on which the run script.

**Example created event :**




Depending on the setting ASCI protocol set value in hex or DEC example.
50 in (HEX) is 80 (DEC)

EventScript run with all device modes (HEX , HEX with prefix and DECIMAL)

# Bookmark A/C

Bookmark A/C is used to define the air-conditioning or heat recovery by third parties and their control through the application iHC.

**Supported are:**

LG Clims

CoolMaster, CoolMasterNet

Air Pohoda

Atrea

Universal 0-10V

LG Clims over the modul PI-485 over Advantech Adam 4571

CoolMaster series 1000D, 2000S, 3000T, 4000M, 6000L, 7000F, 8000HM, 9000M, CoolMasterNet over Advantech Adam 4571

CoolMasterNet

| | | | |
|---|---|---|---|
| **Daikin** | **DK)** | **Mitsubishi Electric** | **(ME)** |
| **Fujitsu** | **(FJ)** | **Mitsubishi Heavy** | **(MH)** |
| **Gree** | **(GR)** | **Panasonic** | **(PN)** |
| **Hitachi** | **(HT)** | **Samsung** | **(SM)** |
| **Intensity** | **(MD)** | **Sanyo** | **(SA)** |
| **Kentatsu** | **(KT)** | **Toshiba** | **(TO)** |
| **LG** | **(LG)** | **Trane** | **(TR)** |
| **Midea** | **(MD)** | Compatibility: indoor, outdoor unit link | |

**Other:**

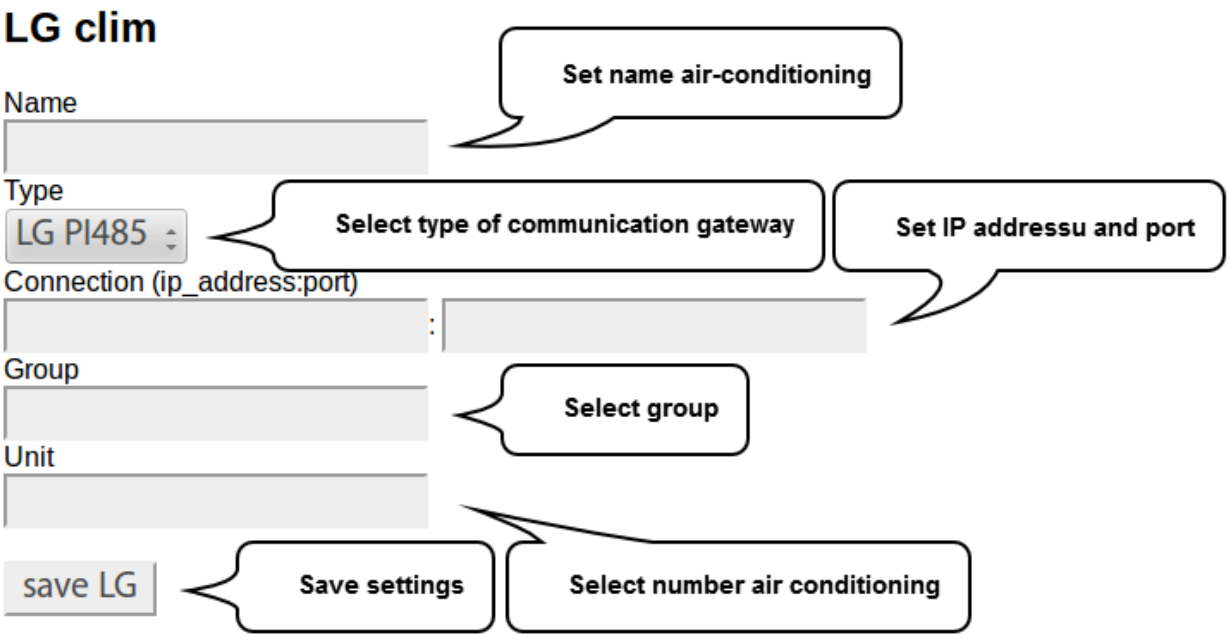
Atrea Duplex 180 EC4 P (0-10), Duplex 180 EC4 P (0-100)

AiRPohoda by Adam 4571

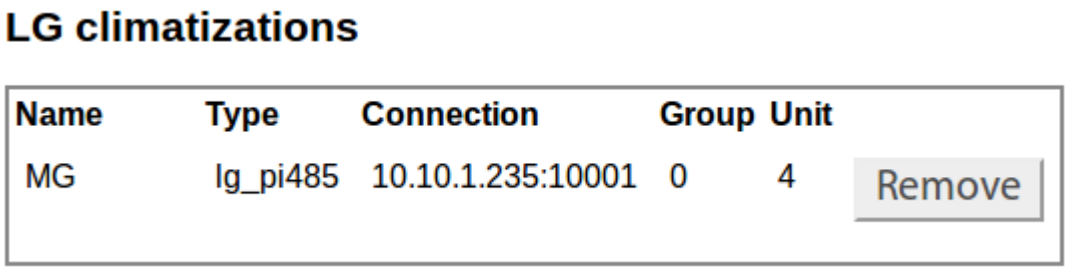
Universal 0-10V by DAC 0-10V

# LG Clims

In the section **LG Clims** is used to define air conditiong LG corporation. Supported are units with communications board **PI485**. LG air conditioning must be installed via RS485 - LAN, for example through device Advantech Adam 4571.




**Example stored LG air condition:**



# CoolMaster

Is used to define air conditiong by universal control unit Coolmaster and control through the application iHC.

**Firs step:**

First, set the control unit Coolmaster according to the manufacturer's manual. (usually via DIP switches inside the unit) Setup converter LAN-serial485 (Recommended converter: Adam 4571) according to Coolmaster
manual and connectconverter with control unit Coolmaster.

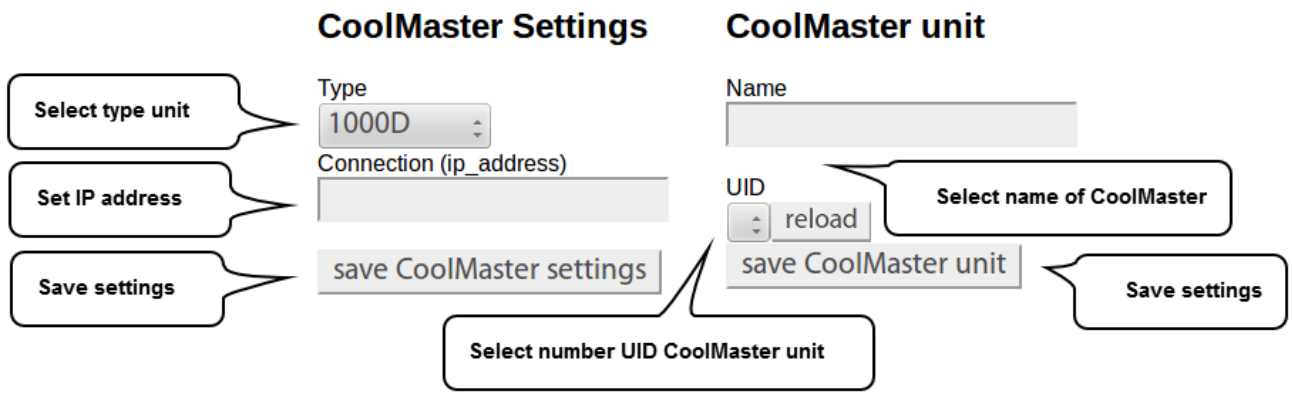
**Test comunication:**

If the air conditioner control unit is properly connected to Coolmaster the display alternately displays the temperature and mode.

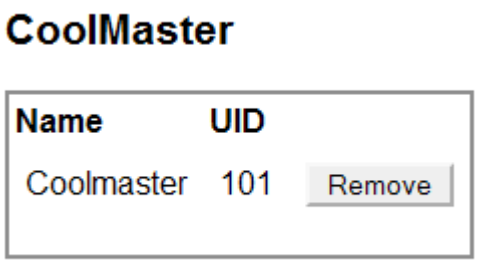
**Second step:**

Moving on to set the air conditioner in the web interface, http://localhost:8080/clims and fill name and IP address convertor and press **button Save the settings** wait for load UID  air condition in system. Now you can select the number of units and save CoolMaster unit.

**! If unsuccessful use reload button and check the air conditioning load UID communication converter with CoolMaster according to the manual.**




**Example stored Coomaster unit :**



For older Coolmasters version is necessary to set convertor to appropriate port.

| | | | |
|---|---|---|---|
| **Coolmaster type:** | 1000D, 2000S, 3000T, 4000M, 6000L, 7000F, 8000I(HM), 9000M | | |
| **Convertor:** | Adam 4571 nebo Gnome 485 | **Port:** | 10001 |
| | CoolMasterNet (default setup) | **Port:** | 10102 |

Perform the function check via utility ncat command format:

ncat IPADDRESS PORT

**Example ncat in terminal:**

| | **Command** | **Significance** |
|---|---|---|
| Command | ncat 10.10.10.111 10102 | Connection to Cooler Master / Convertor |
| Answer | > | Returns the character command line |
| Command | stat2 | List states Air conditions |
| Answer | 000 OFF 25C 27,80C High Heat OK 0 | Return state Air condition |

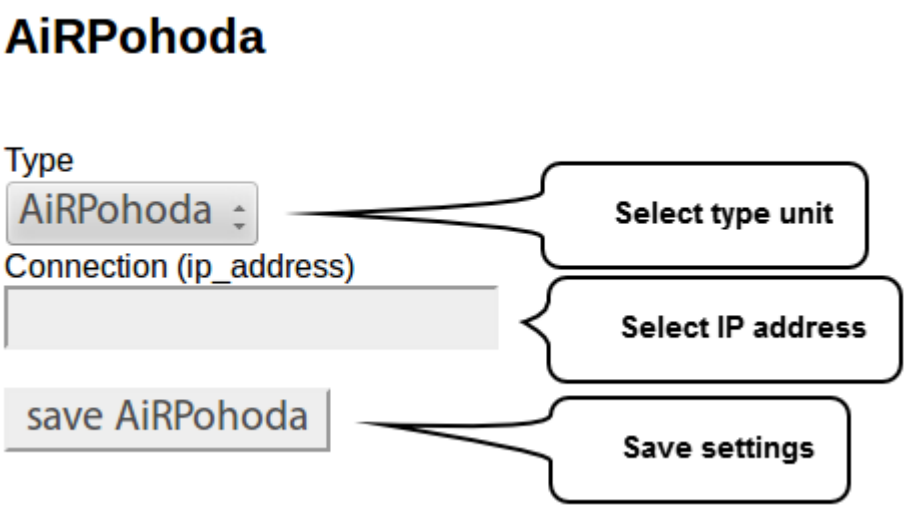
**For windows you can use SPU (Serial port utility)**

Commands and pin setup for cable connection air condition can be found in the reference manual for example: CoolMasterNet

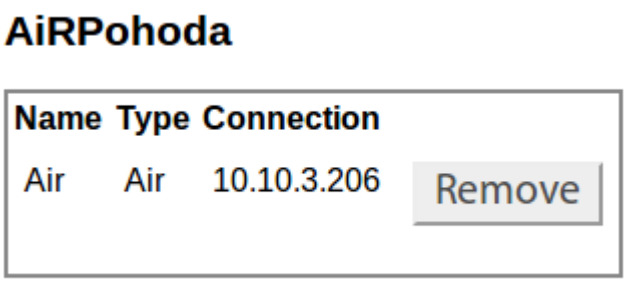
**Maximal number of simultaneous connections for CoolMasterNet is 4 for convertor Adam 4571 only 2.**

# Air Pohoda

Is used to define Air recovery call Air pohoda and control through app iHC. AirPohoda air recovery must be connected via RS485 - LAN, for example through device Advantech Adam 4571.

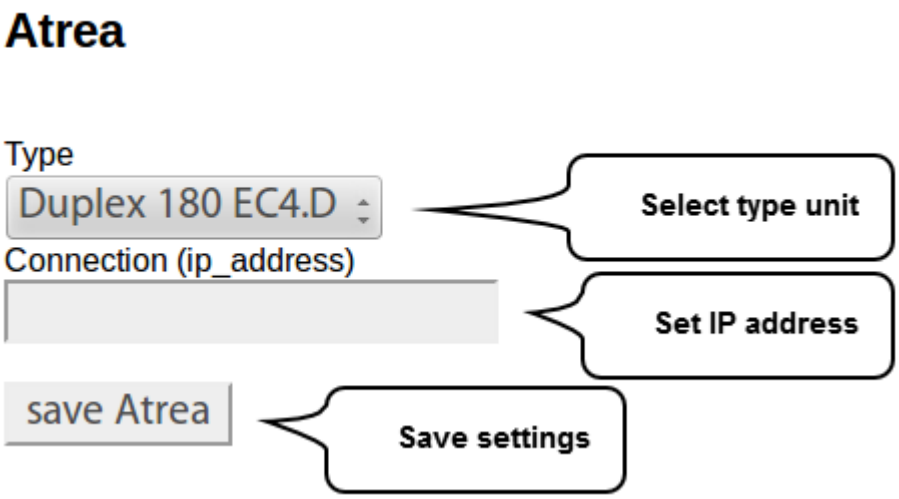



**Example stored Air recovery:**

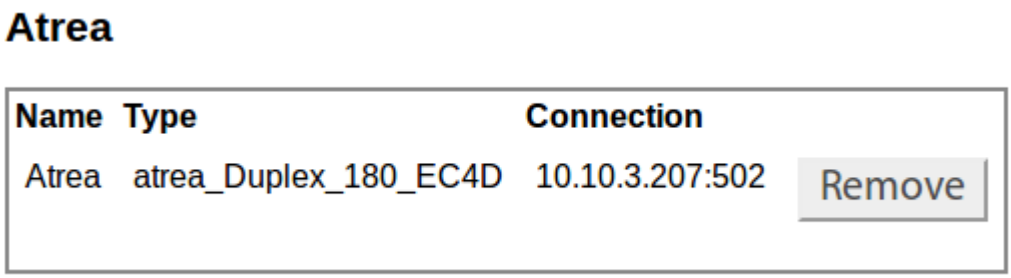


# Atrea

Is used to define Air recovery call Atrea and control through app iHC. Atrea Air recovery must be installed via RS485 - LAN, for example through device Advantech Adam 4571.

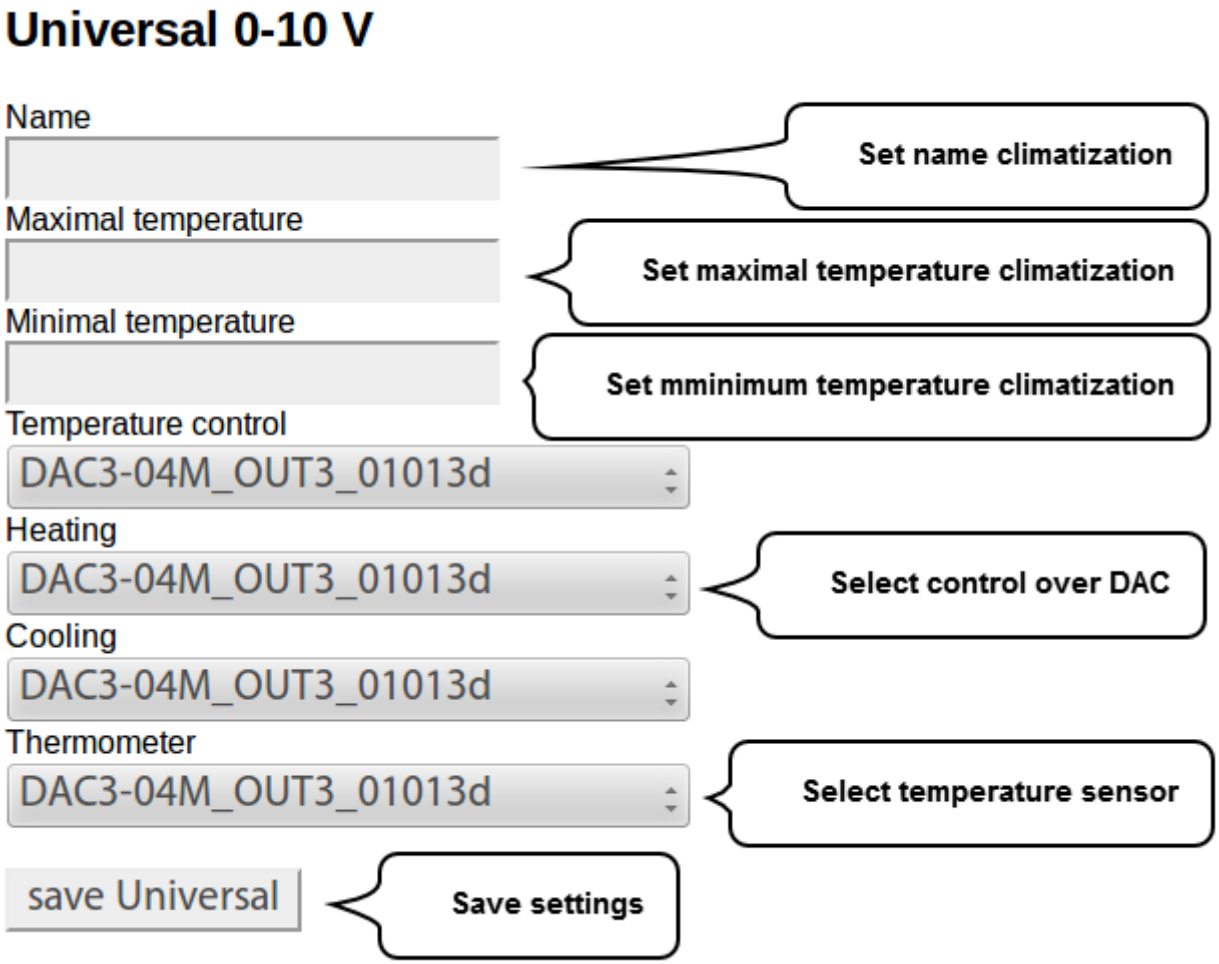



**Example stored Air recovery:**

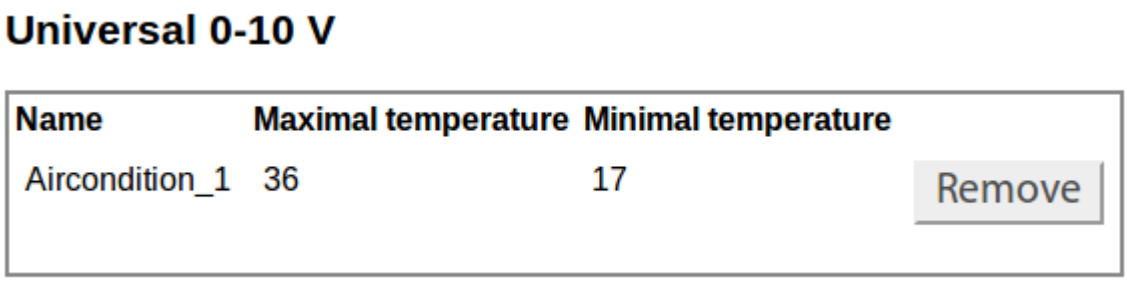


# Universal 0-10V

Is used to define universal air conditiong using DAC 0-10V and control through app iHC.

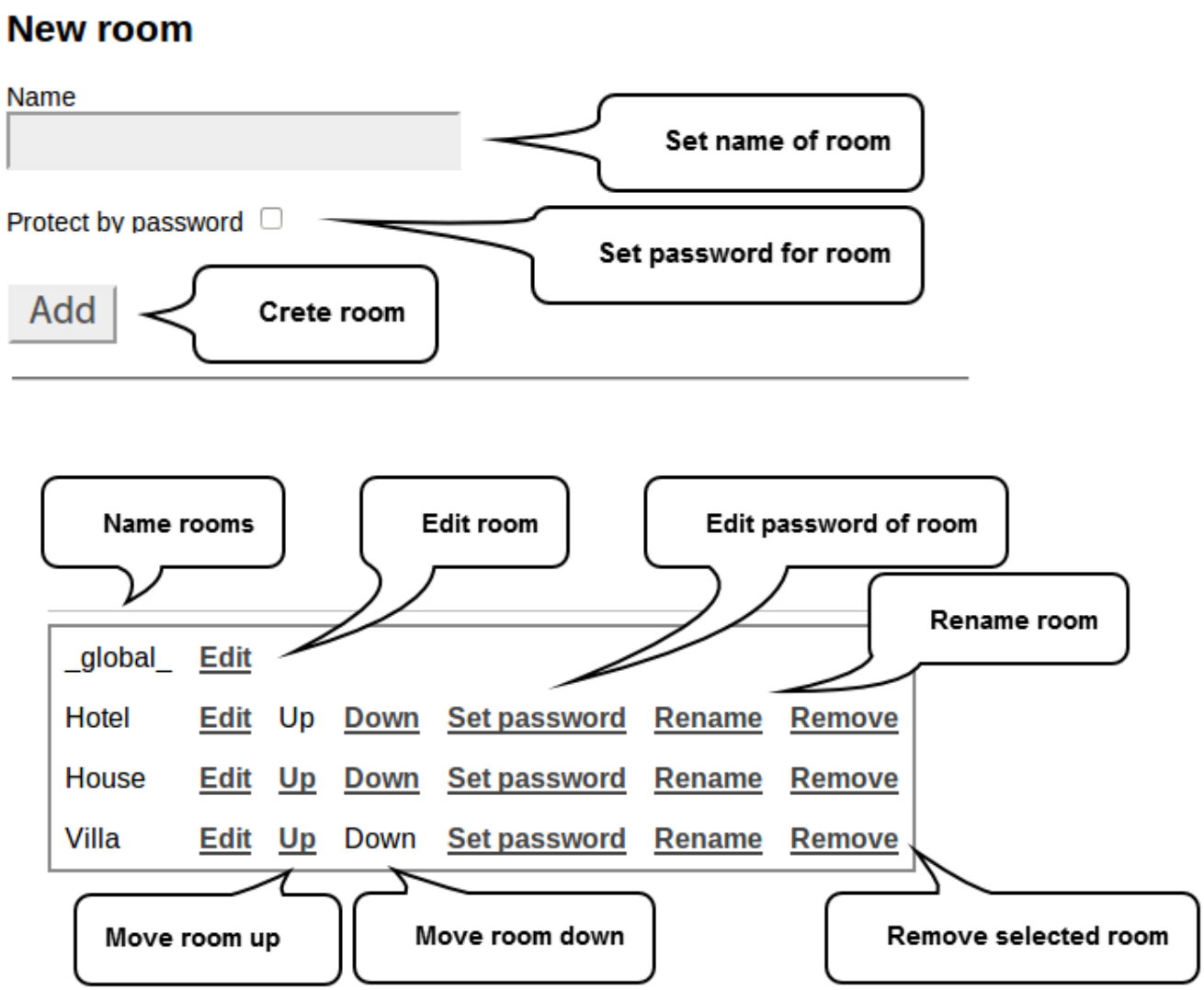



**Example stored Air condition:**



# Bookmark Rooms

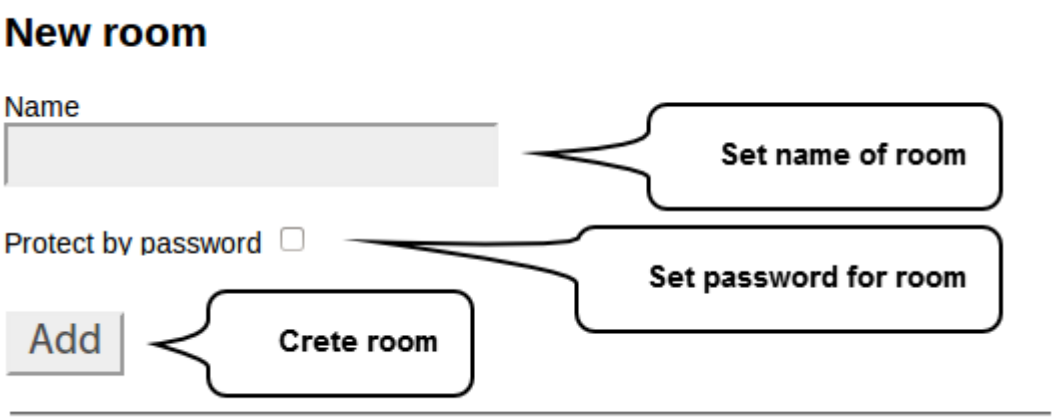
Bookmark Rooms is used to configuration souboru rooms.cfg, for loading applications iHC.. More information in the manual iHC. Rooms are actually "virtual rooms" (groups), which have the option to group the icons and zones for one or more screens.



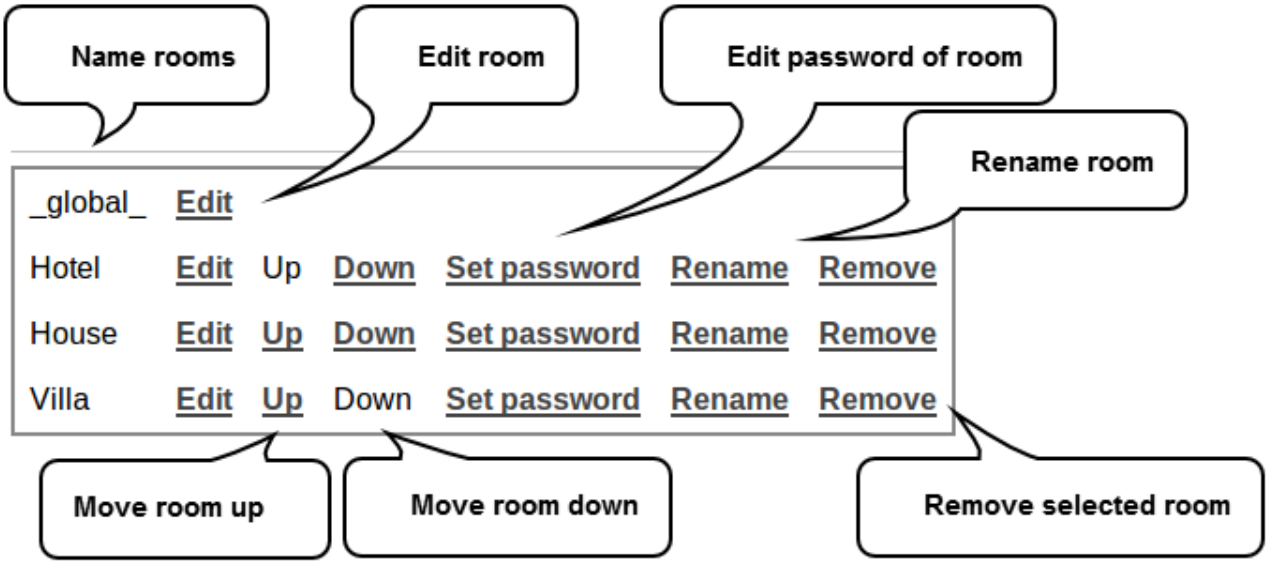

**Name of room allows the use only characters A-Z, a-z, 0-9, -_.**

# New room

Used to define rooms for applications iHC.



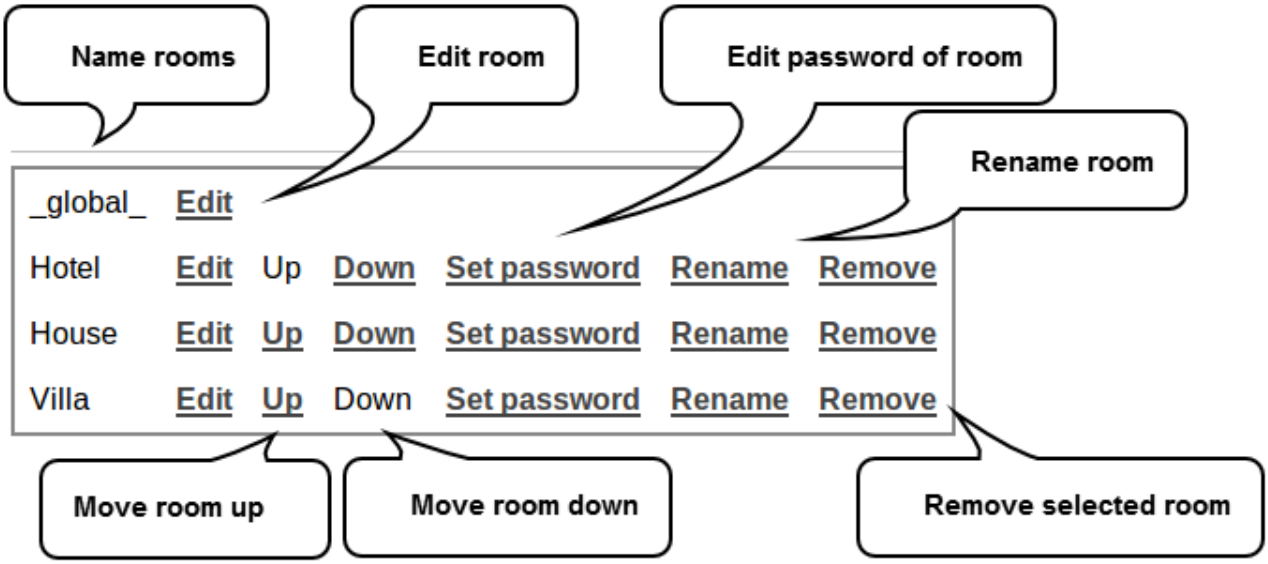

**Example imposed rooms:**


Name rooms
Edit room
Edit password of room
Rename room
_global_ Edit
Hotel Edit Up Down Set password Rename Remove
House Edit Up Down Set password Rename Remove
Villa Edit Up Down Set password Rename Remove
Move room up
Move room down
Remove selected room

**Name of room allows the use only characters A-Z, a-z, 0-9, -_.**

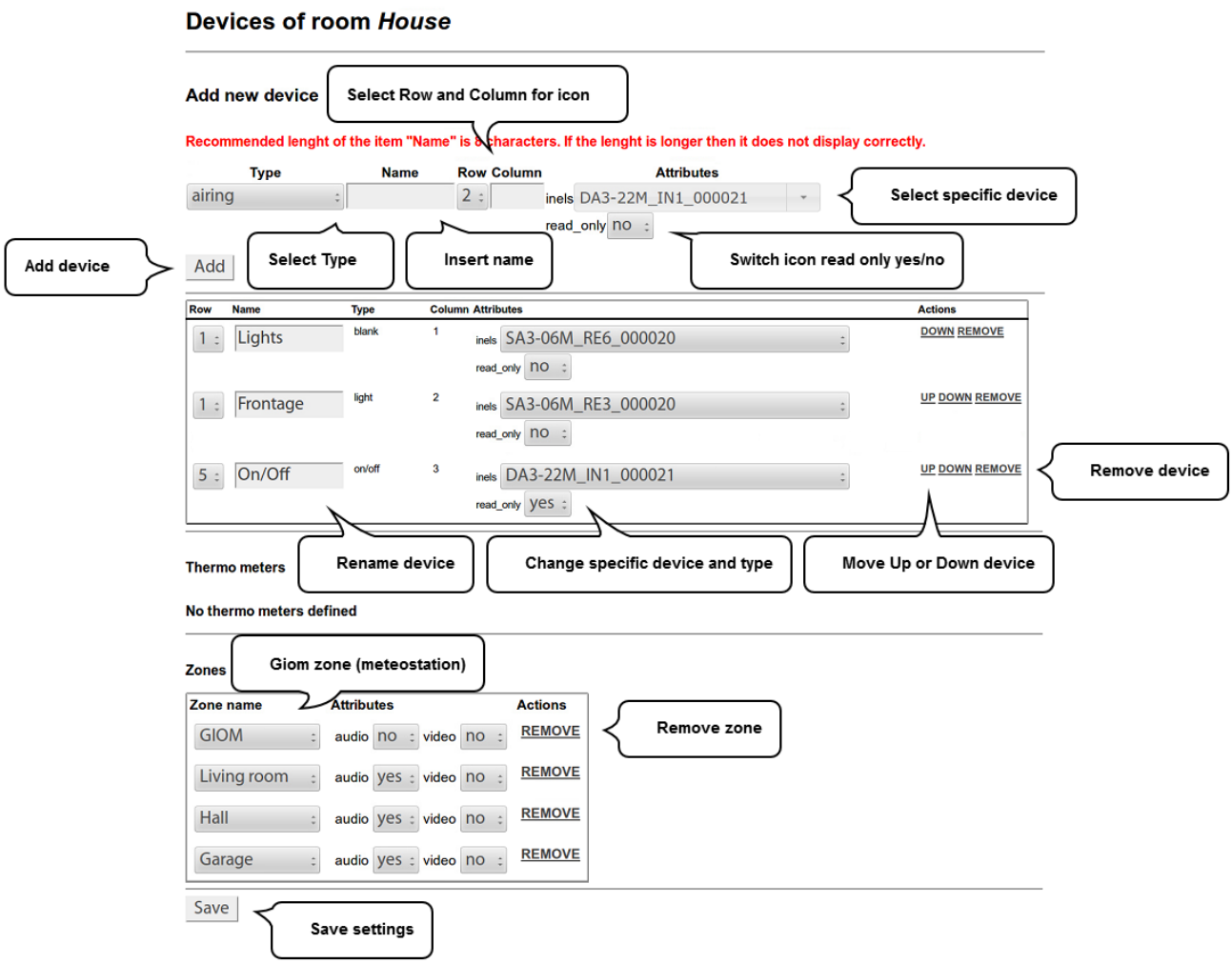
# List of rooms

Listing stored rooms on the server for applications iHC.

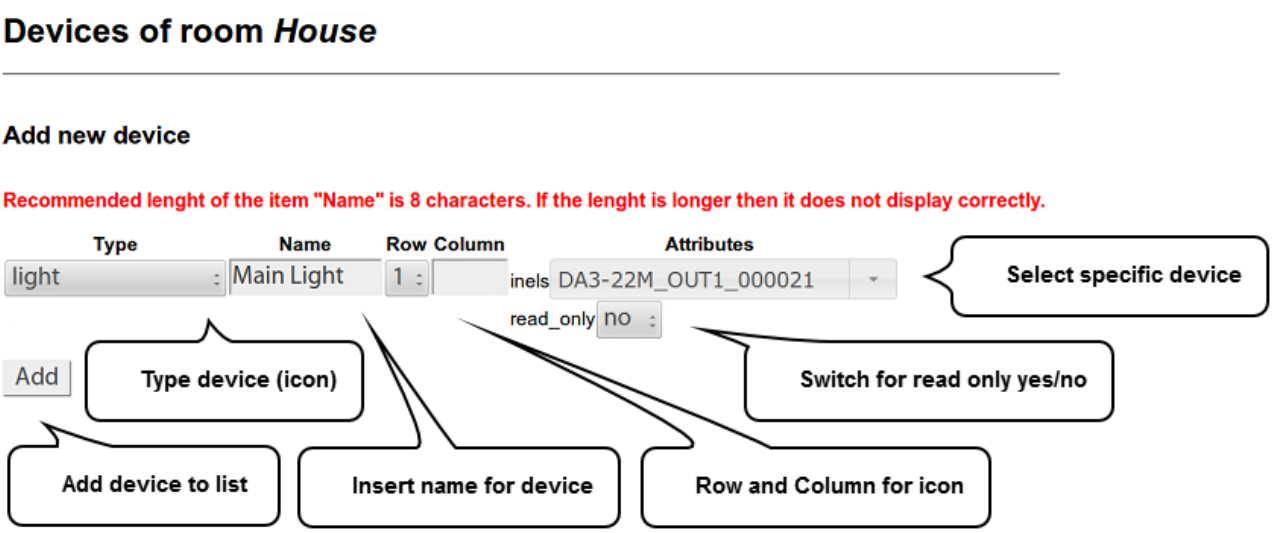

Name rooms
Edit room
Edit password of room
Rename room
_global_ Edit
Hotel Edit Up Down Set password Rename Remove
House Edit Up Down Set password Rename Remove
Villa Edit Up Down Set password Rename Remove
Move room up
Move room down
Remove selected room

# Devices of rooms

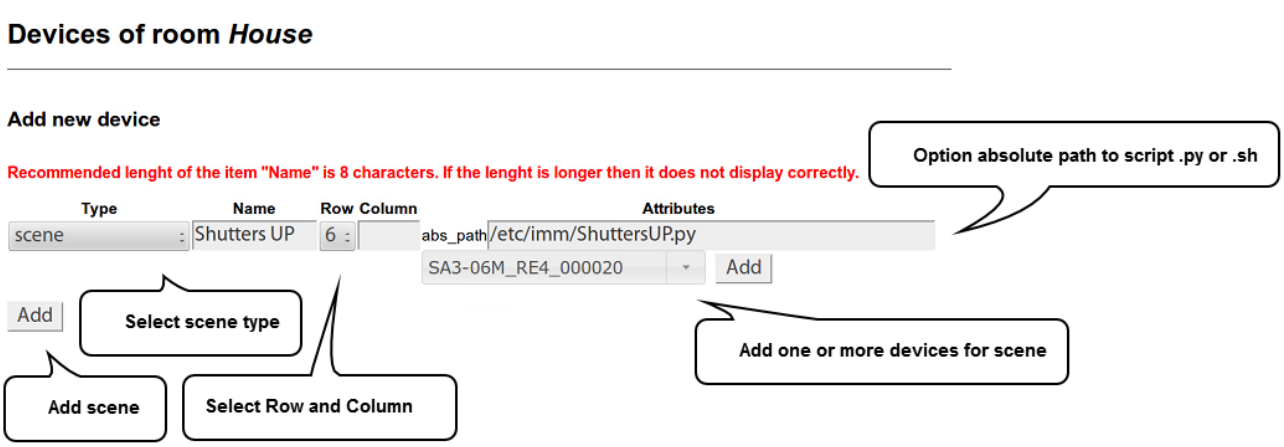
In menu **Devices of room** is used for editing rooms for application iHC.



**Example add device to room House:**




**Example create scene:**




For scene control can be programmed to use a script that can execute various functions defined in it. It is necessary to keep an absolute path starting with "/" and ending with the suffix script ".py" (python).Example: /home/imm/skript_lights.py

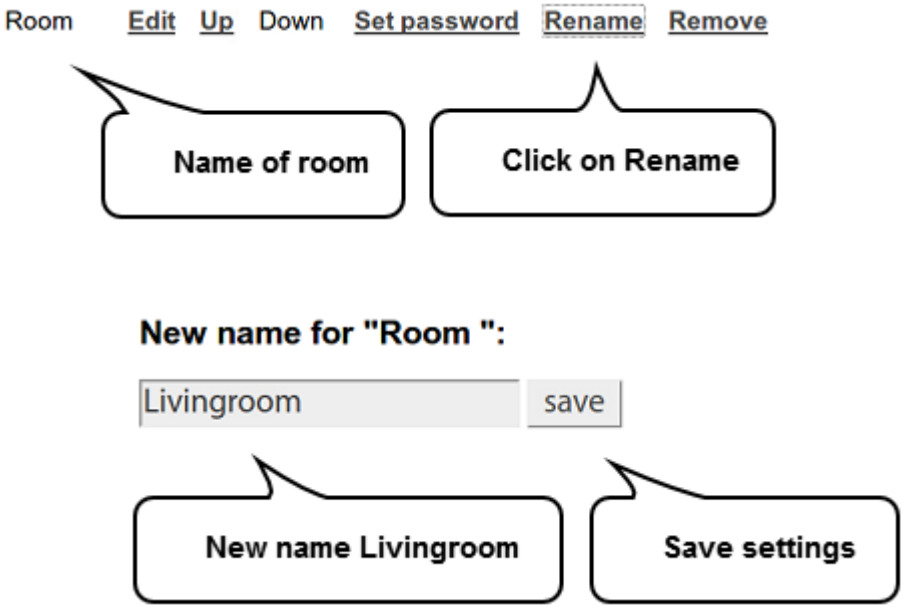
**Type device (icon filter devices) example. type Lamp filtred devices to dimmed devices.**

Read only is a feature that change icon fuction **"no"** control device or **"yes"**icon can't control only information obout device state.

# Rename

In the section **Rename** you can change name of room for app iHC.

**Example rename "Room" to na Living room:**



# Bookmark Cameras

Bookmark **Cameras** is used for define IP cameras, which you want monitor and control by application iHC. HTTP and RTSP port are filled only if you have an IP camera configured to access from outside local network. If the camera remotely connect via HTTP port, so you get to the web interface and you can fully control the camera.
If via RTSP, then you will get only a stream cameras. More about setting and ports see. instruction manual for the camera.More about setting and ports see. manual for the camera.

If you do not fill HTTP or RTSP ports remain in default, HTTP port 80, RTSP port 554

# New camera

**Supported cameras are:**

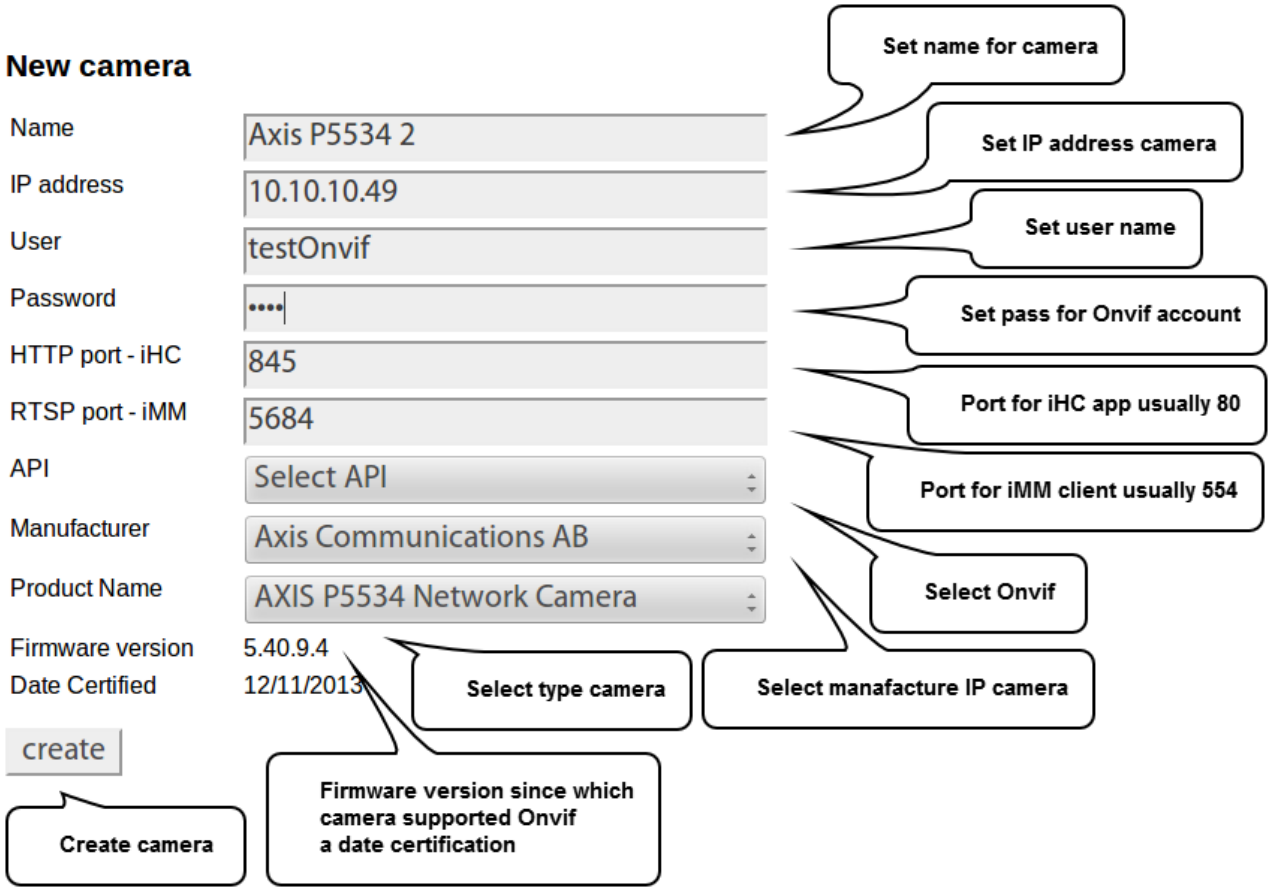
iNELS cam

AXIS protokolu VAPIX2 od verze firmwaru kamery 4.0.X.X a VAPIX3 od firmwaru 5.0.X.X

Kamery with Onvif protocol profile S. s certifikací Onvif link

**Example integration cam Axis supported Onvif:**

Connect the camera according to camera manual and create a user for protocol ONVIF might be different according to manufacturer.Setup a profile S video stream: for applications iHC to MJPEG, jpeg, rtsp and second stream rtsp for Connection server

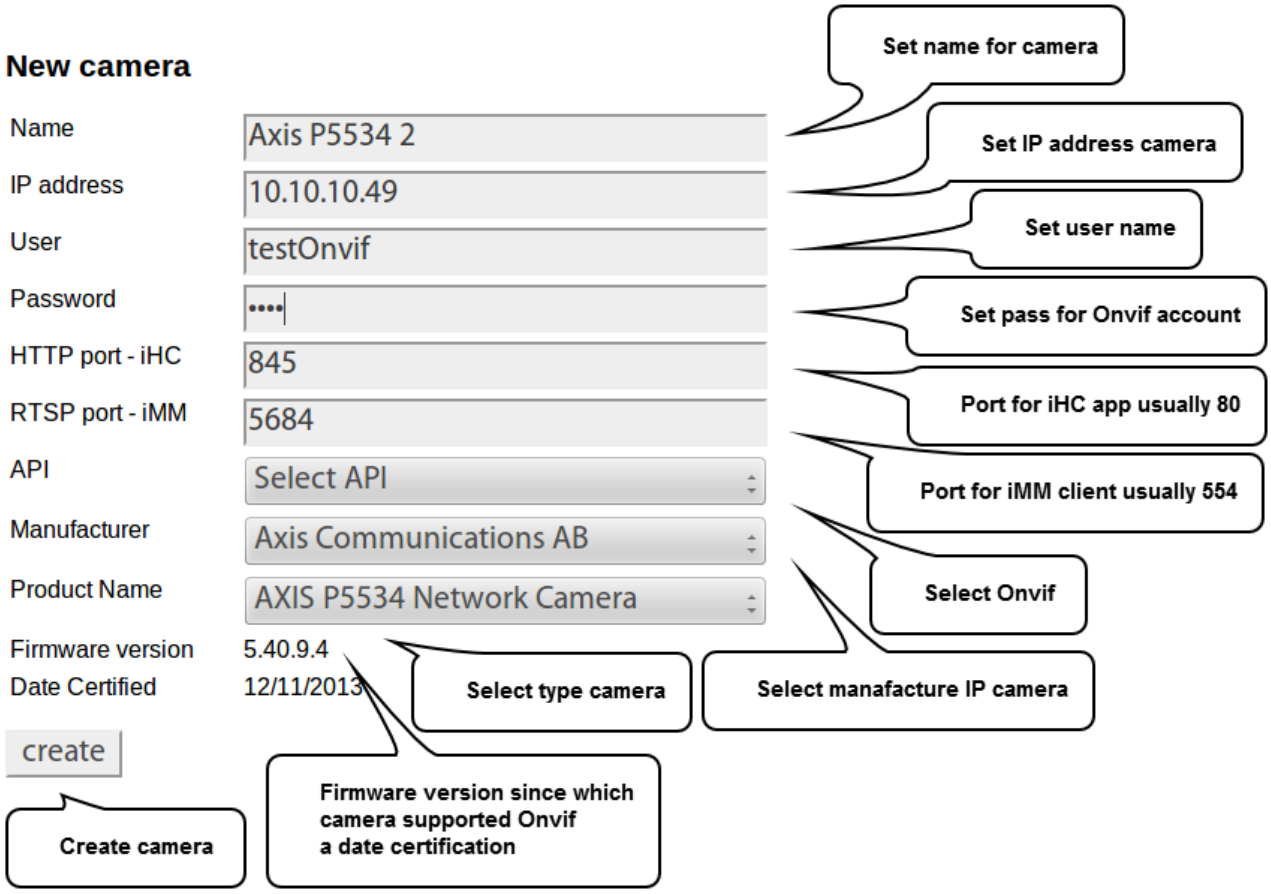


# New camera

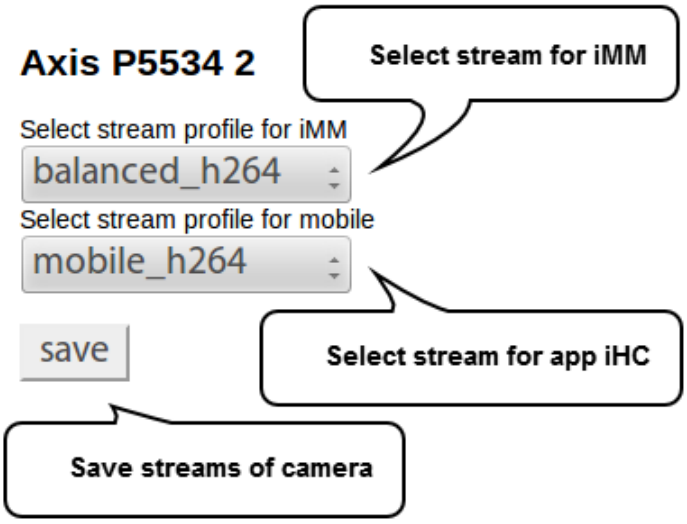
In the section **New camera** is used for define IP cameras.

**Example integration cam Axis supported Onvif:**

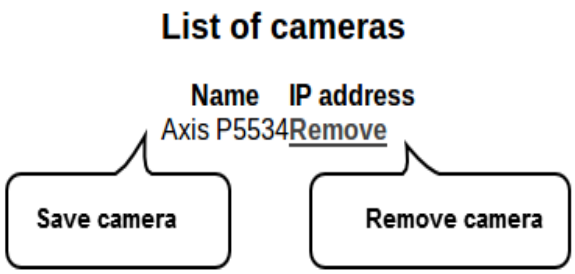
Connect the camera according to camera manual and create a user for protocol ONVIF might be different according to
manufacturer.Setup a profile S video stream: for applications iHC to mjpeg/jpeg and a second stream rtsp for Connection server.



**Add video profile for mobile app iHC.**



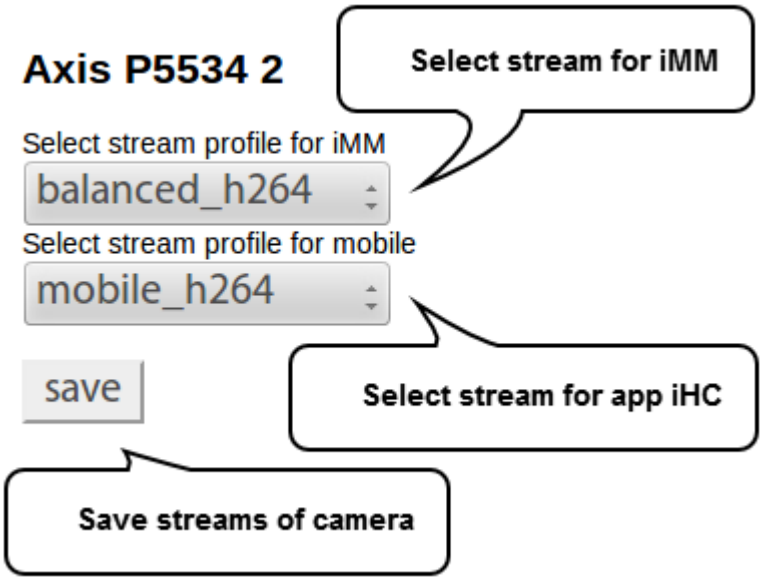

**List saved cameras:**



# Select the stream

In the section **Select the stream** you can choose specific camera streams assign to mobile app iHC.

**Example:**

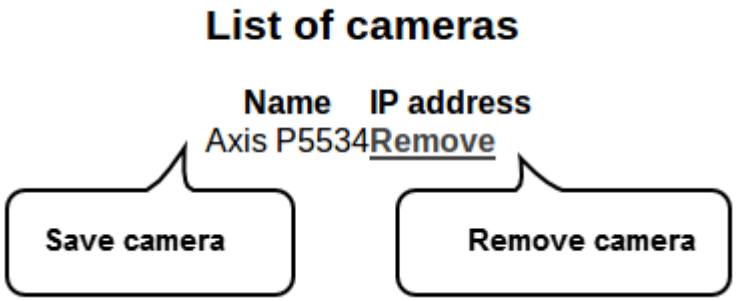


# No camera defined

You have no defined cameras at Connection server.

# List of cameras

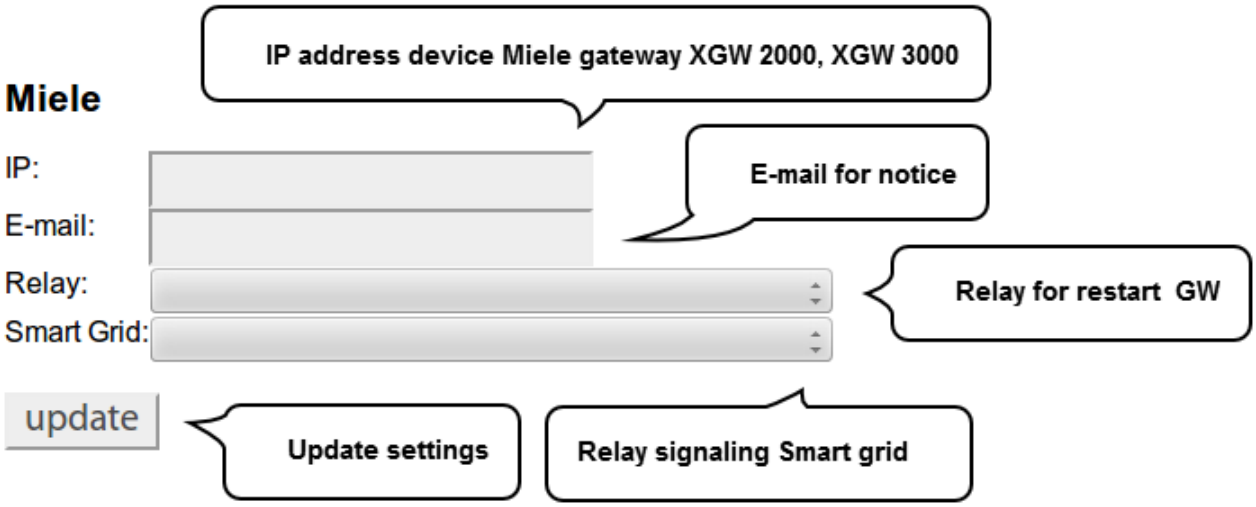
Menu List of cameras show saved cameras Connection server and options for remove selected camera.



# Bookmark Miele

In bookmark **Miele** set IP address device Miele gateway, that serves remote control of appliances over powerline, or ZigBee protocol.

Supported are: XGW 2000, XGW 3000 (Firmware 1.1,1.2)

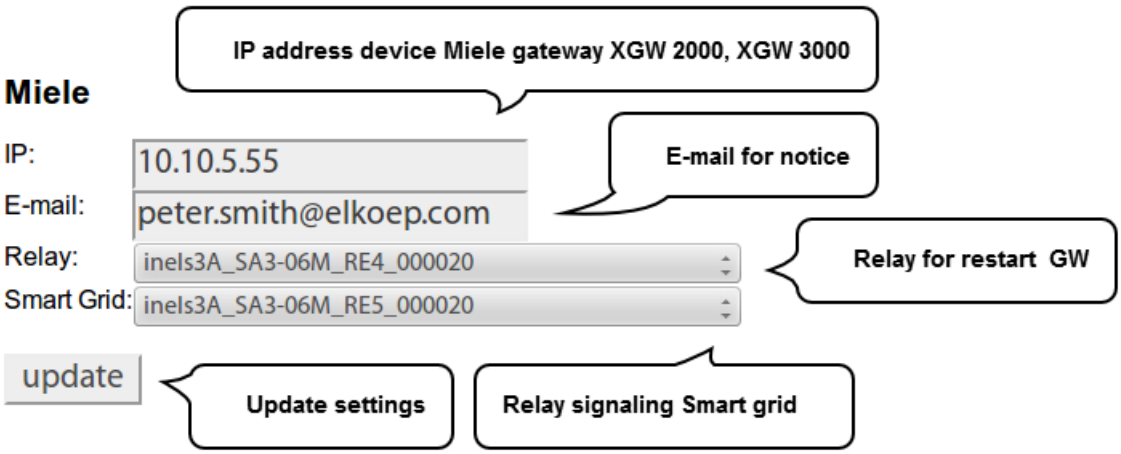



Set IP address MieleGateWay is stored in the file /etc/imm/miele

# Miele

In the section **Miele** set IP adresu device Miele gateway, that serves remote control of appliances over powerline, or ZigBee protocol.

Supported are: XGW 2000, XGW 3000 (Firmware 1.1, 1.2)




Set IP address MieleGateWay is stored in the file. /etc/imm/miele

**Relay for restart GW is used for power off /on if gateway lost network connection and sended notification on user email.**

# Bookmark Intercoms

Bookmark **Intercoms** is used for define 2N settings and VOIP accounts for applications iHC.

In the section **2N settings** set access (username, password) and lock code for open door (2N IP intercoms). Setting the following **Username** and **Password** access data on the web interface 2N and **Lock code** set value to relay 2N intercom.

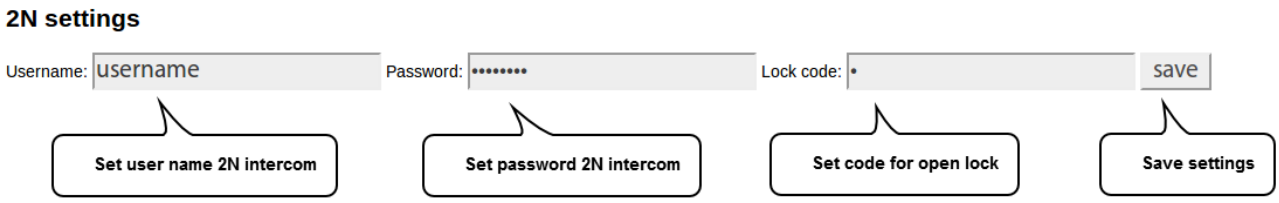
**! Connection server support set only one door intercom for open via DTMF.**

**Supported IP intercoms are :**

| | |
|---|---|
| 2N | Helios Verso |
| | Helios Force |
| | Helios Safety |
| | Helios Vario |
| Unitech | Tashi MT 200L |

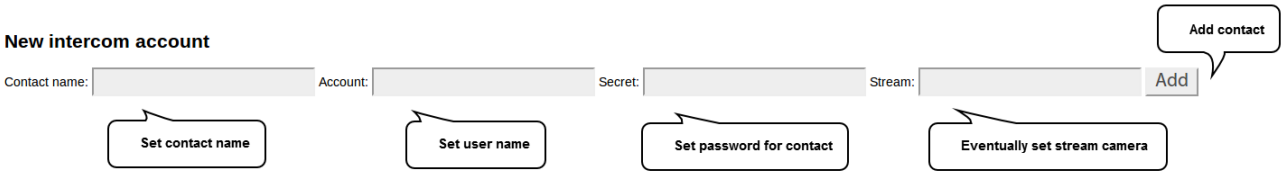
# 2N settings

In the menu **2N settings** set access (username, password) and lock code for open door (2N IP intercoms).



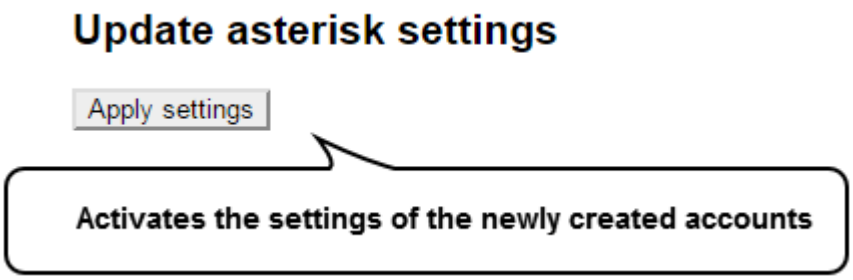

# New intercom account

In the menu **New intercom account** creating VOIP accounts on server side for applications iHC.



# Update asterisk settings

Butoon Apply settings activated VOIP newly created accounts.



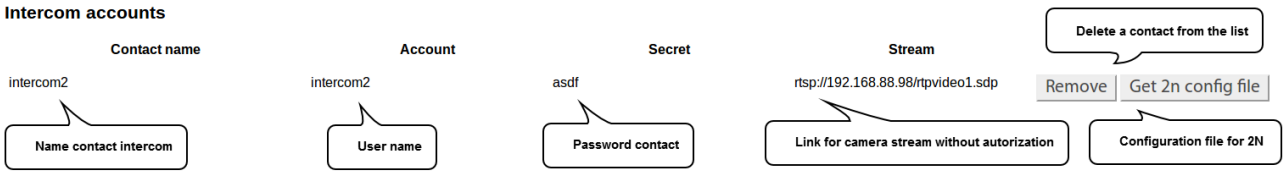

# Intercom accounts

In the menu **Intercom accounts** are shown VOIP account for Connection server.

**Example of an embedded account intercom 2N:**

Intercom from the company 2N are inserted so that the Contact name contained the word "intercom"
for example: intercom2, Intercom_Entry etc. capitalization does not matter.

According to the phrase "intercom" in the name of the application will recognize that this is a sound and allow the door opening preset Lock code, if we choose a different name for intercom will behave like an ordinary contact and opening function must be set manually in the mobile app.




**For open switch intercom 2N setup signal DTMF first in web interface Connection server Intercoms > *2N settings* or in app iHC.**

Stream for camera 2N add in format **rtsp://IPADDRESS**

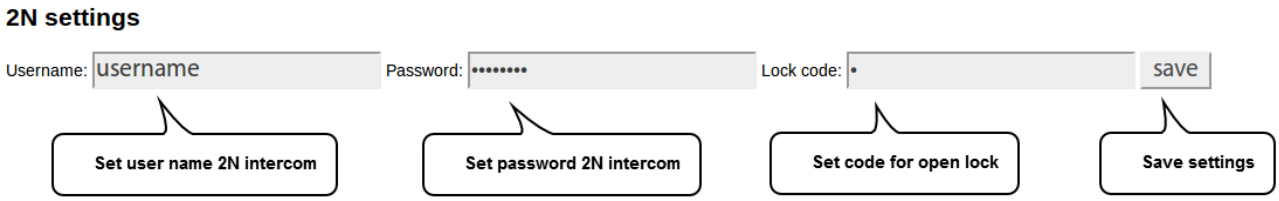
Manual link for video intercom app iHC add in contact intercom to field IP address in this format:

**http://IPADDRESS/enu/camera640x480.jpg**

In the case of multiple IP intercom 2N must be set all intercoms for open relay identically (User name, Password, Lock code)

# 2N settings

In the section **2N settings** set access (username, password) and lock code for open door 2N IP intercoms. Setting **Username** and **Password** are access datail on the web interface 2N and **Lock code** set value for switch to relay 2N intercom.

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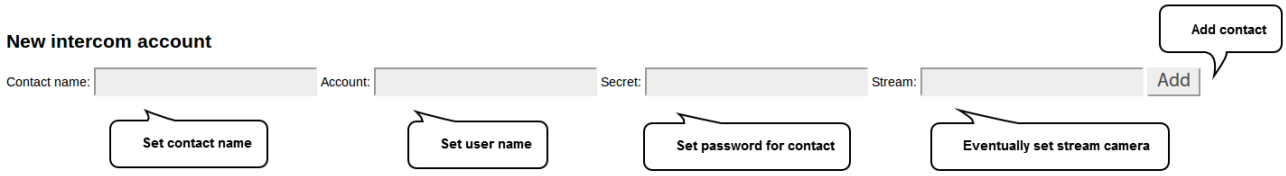
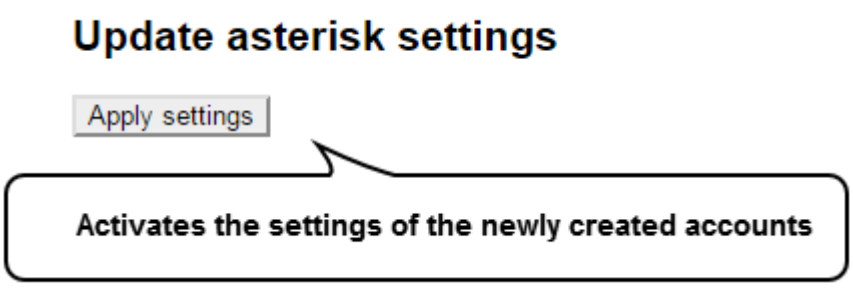



Stream for cam 2N add in format rtsp://IPADDRESS

**For view in application iHC must be stream format mjpeg**

# Update asterisk settings

Button **Apply settings** activate the newly created accounts VOIP and restart asterisk PBX .



# Intercom accounts

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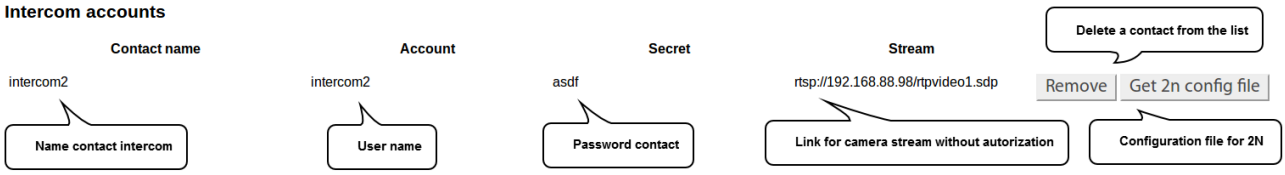



**For open switch intercom 2N setup signal DTMF first in web interface Connection server Intercoms**
**2N settings or in app iHC.**

Stream for camera 2N add in format **rtsp://IPADDRESS**

Manual link for video intercom app iHC add in contact intercom to field IP address in this format:

**http://IPADDRESS/enu/camera640x480.jpg**

In the case of multiple IP intercom 2N must be set all intercoms for open relay identically (User name, Password, Lock code)

# Bookmark Energy

Directly in iHC aplication the amount of energy consumption can be clearly displayed. Energy is recounted based on the amount of impulses that provide outputs from meters (gas-meters, electrometers, water-meters). Impulses are further processed in an optional input unit of system iNELS (IM2-140M, IM2-20/40/80B) in form of a counter. This value is by means of export.pub transferred to Connection Server where variable is in iMMCC on bookmark Energy assigned to Watter/Gas/Electrical. The setting of pulse conversion to unit of measure, selection of currency and setting the currency/unit is performed in iMMCC application in activated Energy module. The Energy module allows recording of consumed energy for a day, week, month and year. Data are saved in Connection server – the data do not get lost even in case of power shutdown or power cut. Consumption can be displayed in a table or graph.

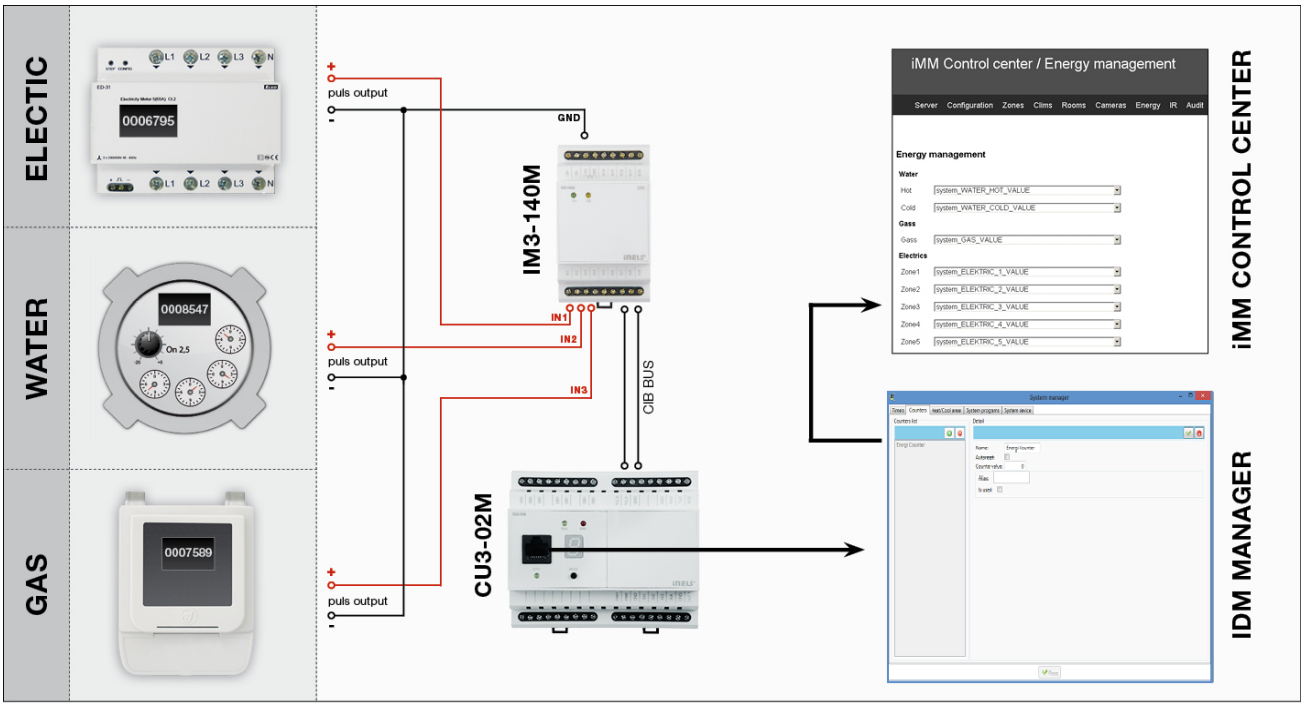
The absorbed energy is shown in quantity but also in financial value.

**The list of supported measuring devices, which have a pulse output, can be found here:**

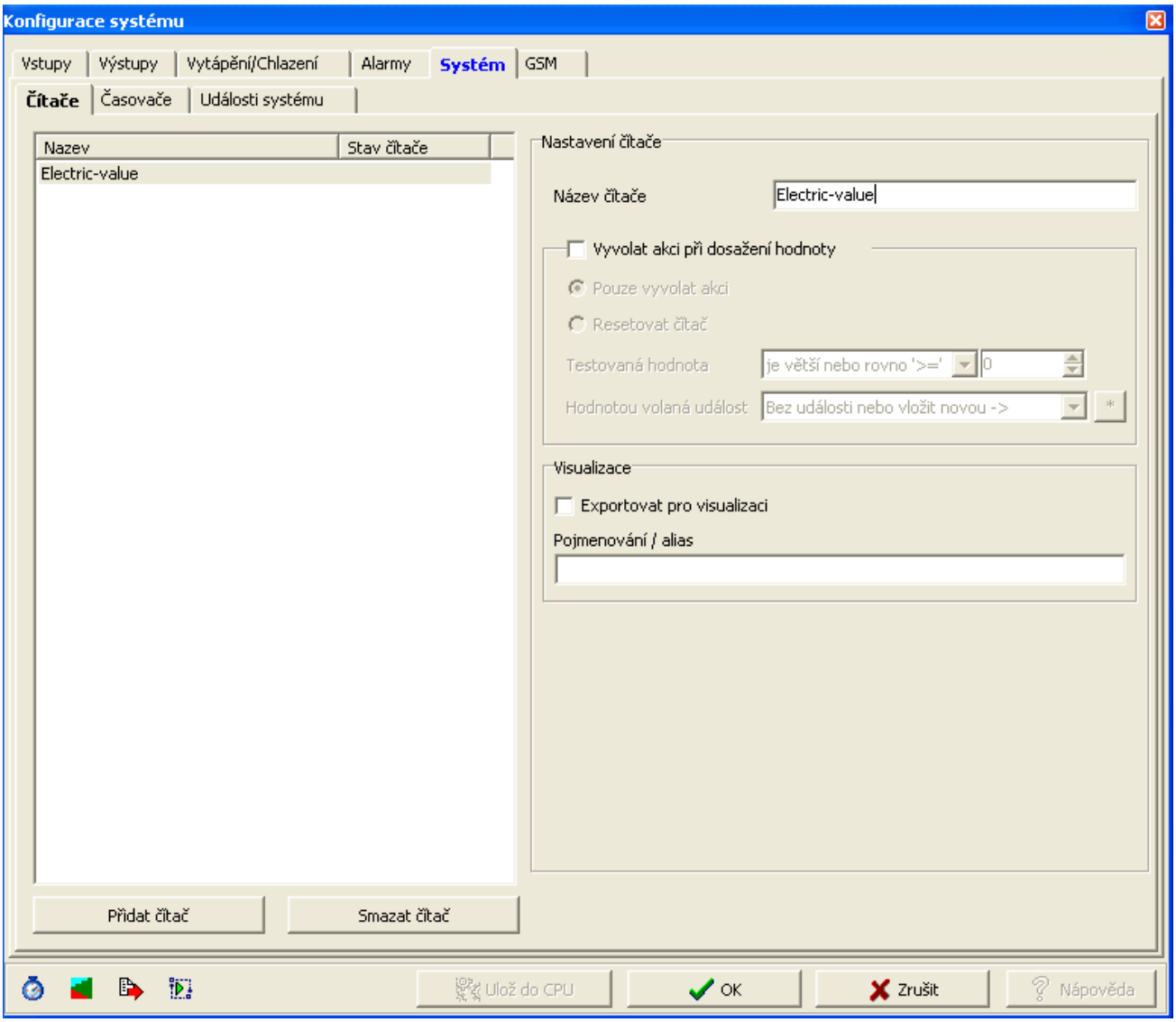
1. Click on the System Configuration button (icon of hammer and screwdriver – F11)
2. Select bookmark System -> counters
3. Add counter that you name by energy you want to measure
4. Create a new action that you name e.g. upload electricity
5. Add a command in the action which will be user action -> commands for counters -> increment counter
6. Select counter that corresponds with given action (e.g. for upload electricity you put counter electricity)
7. Add the action created as described above in system configuration to relevant binary input in action line when the input closes
8. Once the file export-pub is created and uploaded to iMM server, in bookmark Energy you can assign in the counter value line (electricity_VALUE). It must be VALUE in the line.

**Connection of energy meter**

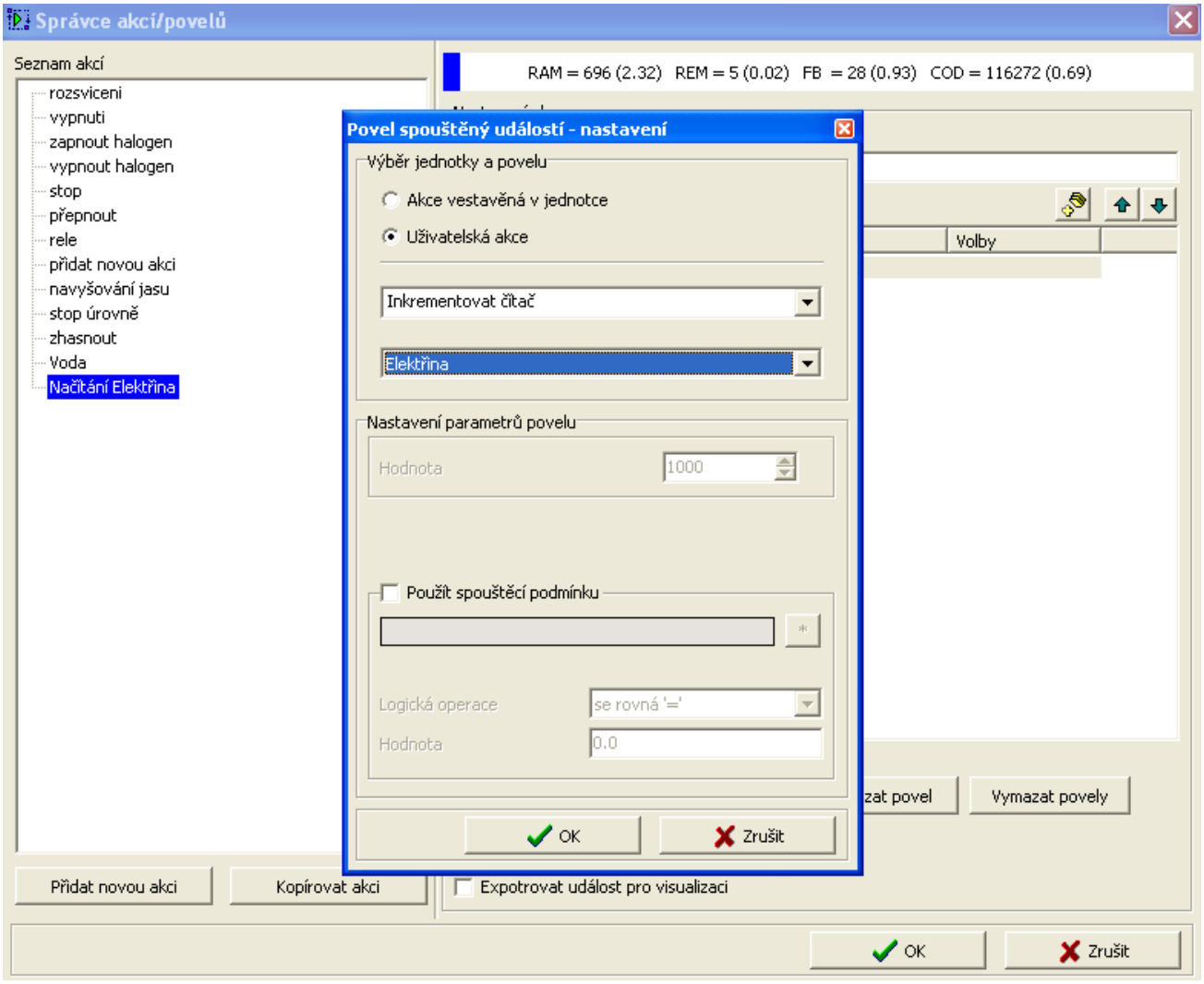
Energy meter connects by means of a binary output unit. Output from supported energy meter is distinguished to + a -, that's why polarity has to be maintained by bringing – minus to GND terminal and + plus to IN terminal.



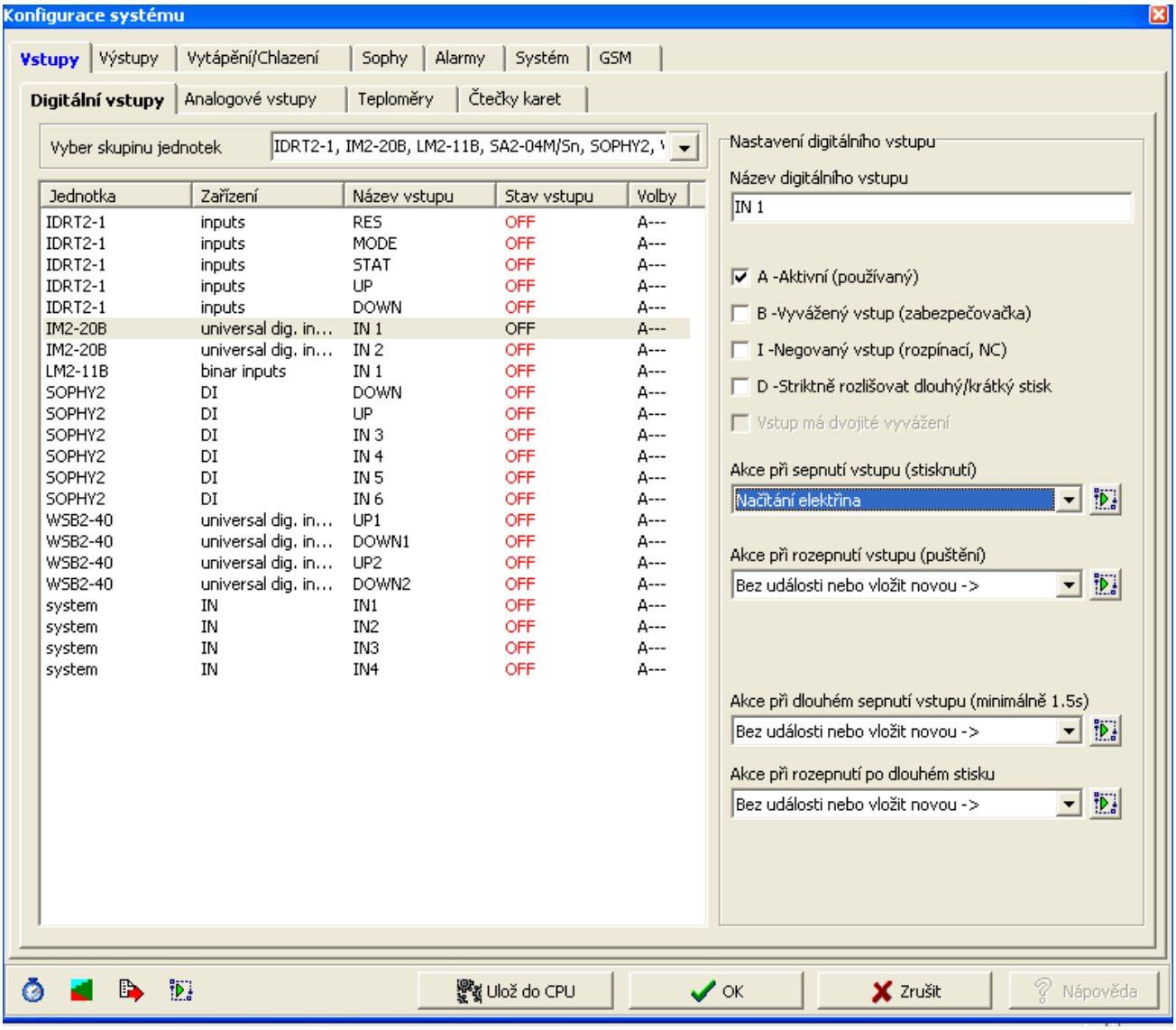

**Creation of counter in iDM:**



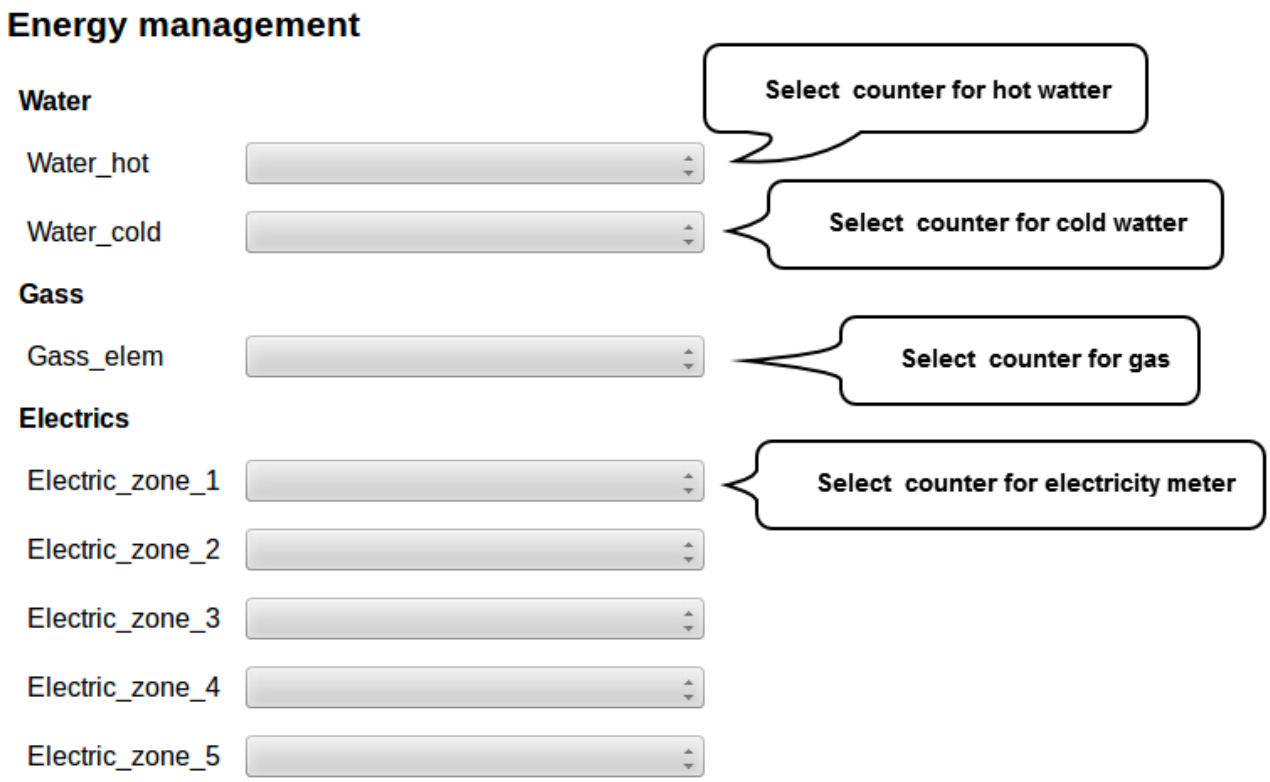
**Creation of action “Counter incrementing":**



**Action assignment to binary input where output from measuring instrument is connected.**


Konfigurace systému
Vstupy
Výstupy
Vytápění/Chlazení
Sophy
Alarmy
Systém
GSM
Digitální vstupy
Analogové vstupy
Teploměry
Čtečky karet
Vyber skupinu jednotek
IDRT2-1, IM2-20B, LM2-11B, SA2-04M/Sn, SOPHY2,
Jednotka | Zařízení | Název vstupu | Stav vstupu | Volby
IDRT2-1 | inputs | RES | OFF | A---
IDRT2-1 | inputs | MODE | OFF | A---
IDRT2-1 | inputs | STAT | OFF | A---
IDRT2-1 | inputs | UP | OFF | A---
IDRT2-1 | inputs | DOWN | OFF | A---
IM2-20B | universal dig. in... | IN 1 | OFF | A---
IM2-20B | universal dig. in... | IN 2 | OFF | A---
LM2-11B | binar inputs | IN 1 | OFF | A---
SOPHY2 | DI | DOWN | OFF | A---
SOPHY2 | DI | UP | OFF | A---
SOPHY2 | DI | IN 3 | OFF | A---
SOPHY2 | DI | IN 4 | OFF | A---
SOPHY2 | DI | IN 5 | OFF | A---
SOPHY2 | DI | IN 6 | OFF | A---
WSB2-40 | universal dig. in... | UP1 | OFF | A---
WSB2-40 | universal dig. in... | DOWN1 | OFF | A---
WSB2-40 | universal dig. in... | UP2 | OFF | A---
WSB2-40 | universal dig. in... | DOWN2 | OFF | A---
system | IN | IN1 | OFF | A---
system | IN | IN2 | OFF | A---
system | IN | IN3 | OFF | A---
system | IN | IN4 | OFF | A---
Nastavení digitálního vstupu
Název digitálního vstupu
IN 1
A -Aktivní (používaný)
B -Vyvážený vstup (zabezpečovačka)
I -Negovaný vstup (rozpínací, NC)
D -Striktně rozlišovat dlouhý/krátký stisk
Vstup má dvojité vyvážení
Akce při sepnutí vstupu (stisknutí)
Načítání elektřina
Akce při rozepnutí vstupu (puštění)
Bez události nebo vložit novou ->
Akce při dlouhém sepnutí vstupu (minimálně 1.5s)
Bez události nebo vložit novou ->
Akce při rozepnutí po dlouhém stisku
Bez události nebo vložit novou ->
Ulož do CPU
OK
Zrušit
Nápověda

**Assign counter value in iMM Control Center**




**Example:**

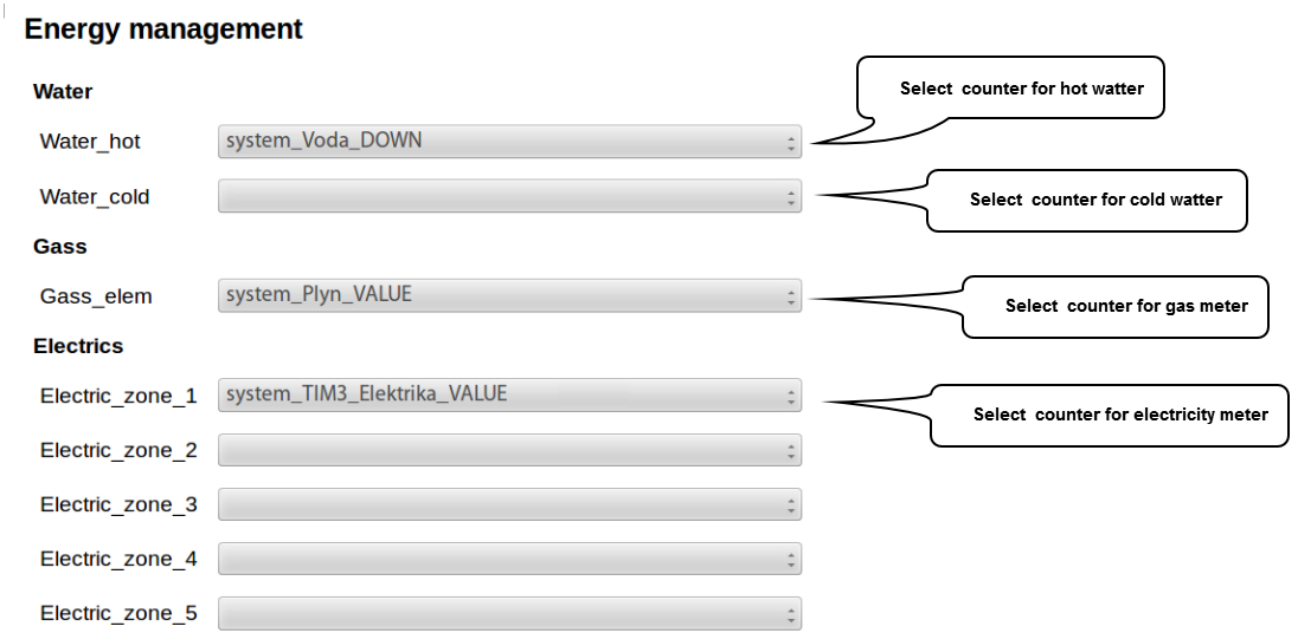
1 kWh = 100,- Kč = 100 pulzů
Base Unit – **kWh**
Impulses – **100** per **1** kWh
Price – **1** per 1 impulse

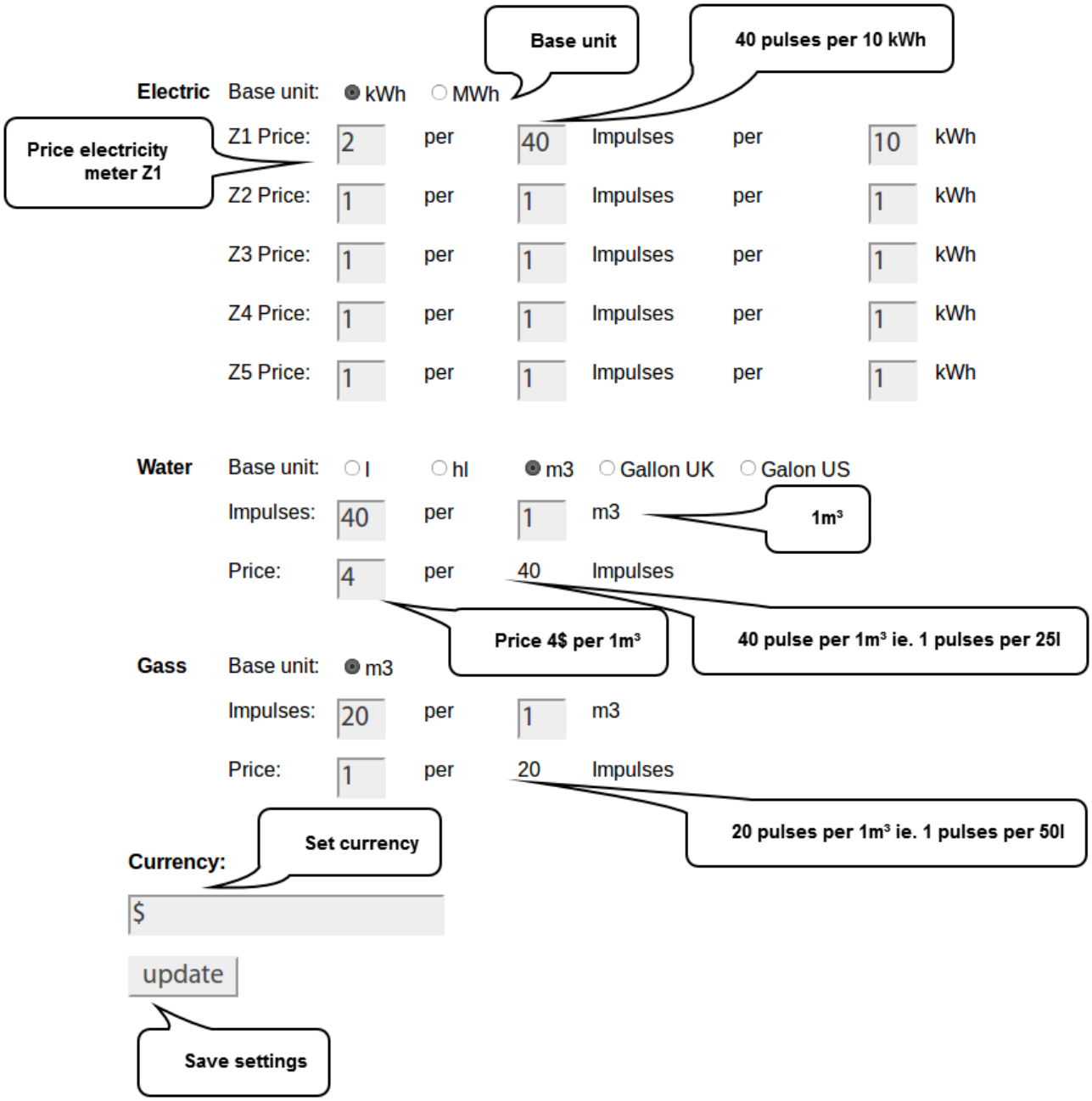
Create counter in sowftware IDM3 see. Create counter IDM3

# Energy management

In the section **Energy management** select binary inputs for WATER, GAS, ELECTRICITY and adding them to unit, impulse, currency.

**Example Energy management:**



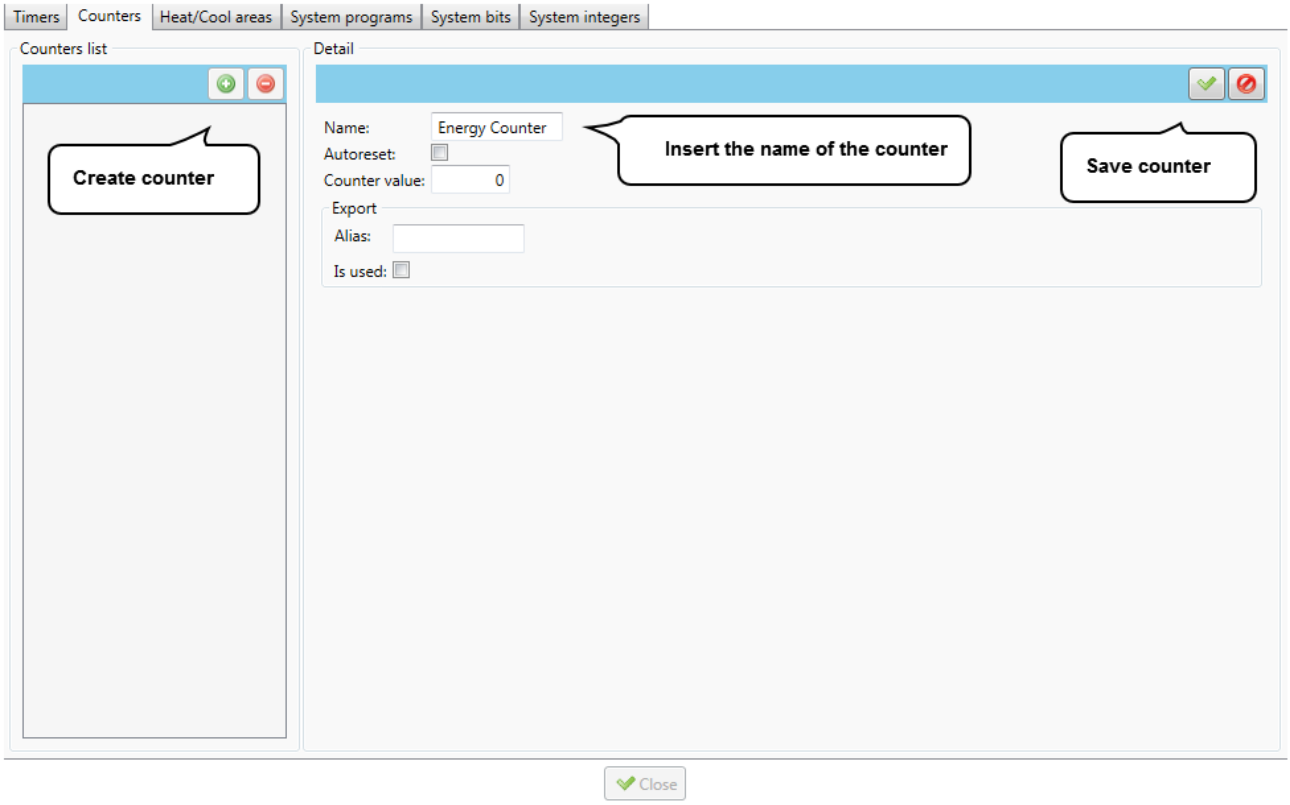



Create counter see. bookmark Energy

# Create counter IDM3

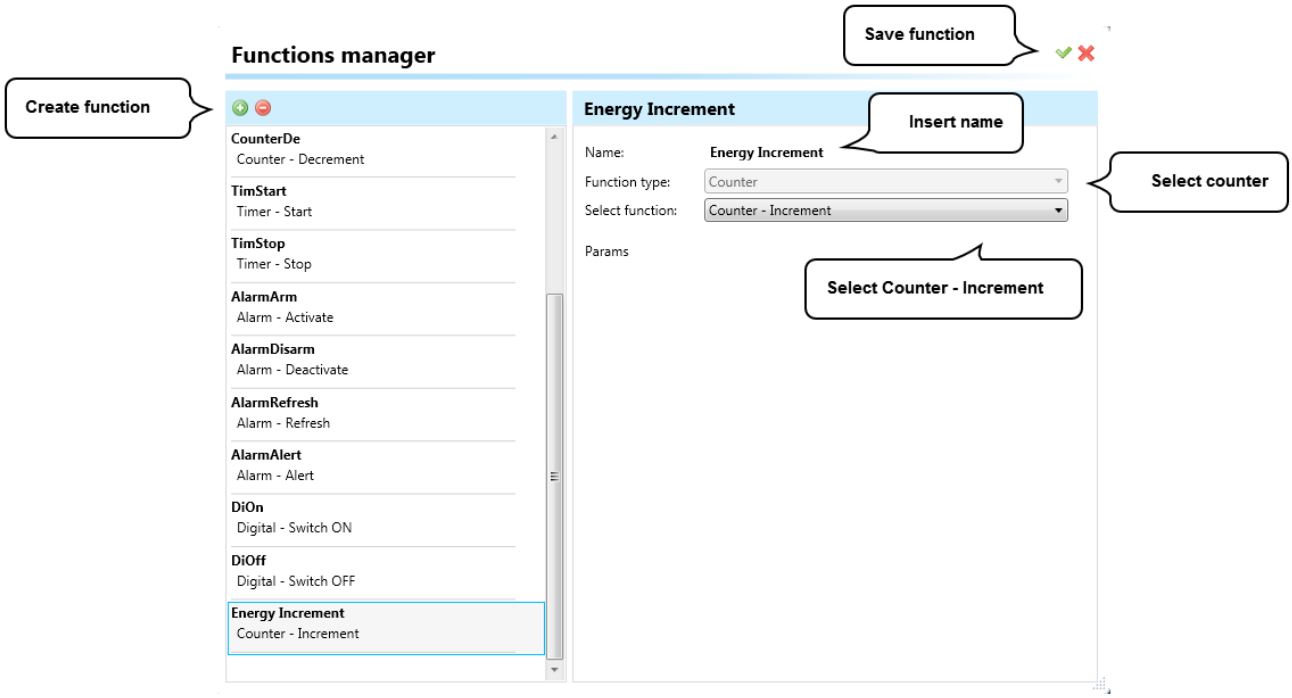
Create counter in software IDM3

In bookmark M**anagers**, select the **System Manager** and go to the tab **Counters** where we create a counter name.



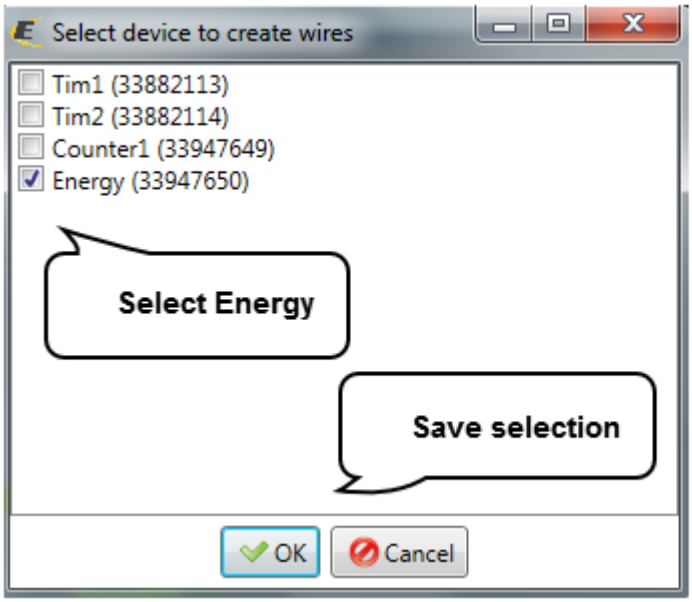
**Creating functions for counter**

In the **Functions** tab, select the **Function Manager** and create a function called Energy Increment

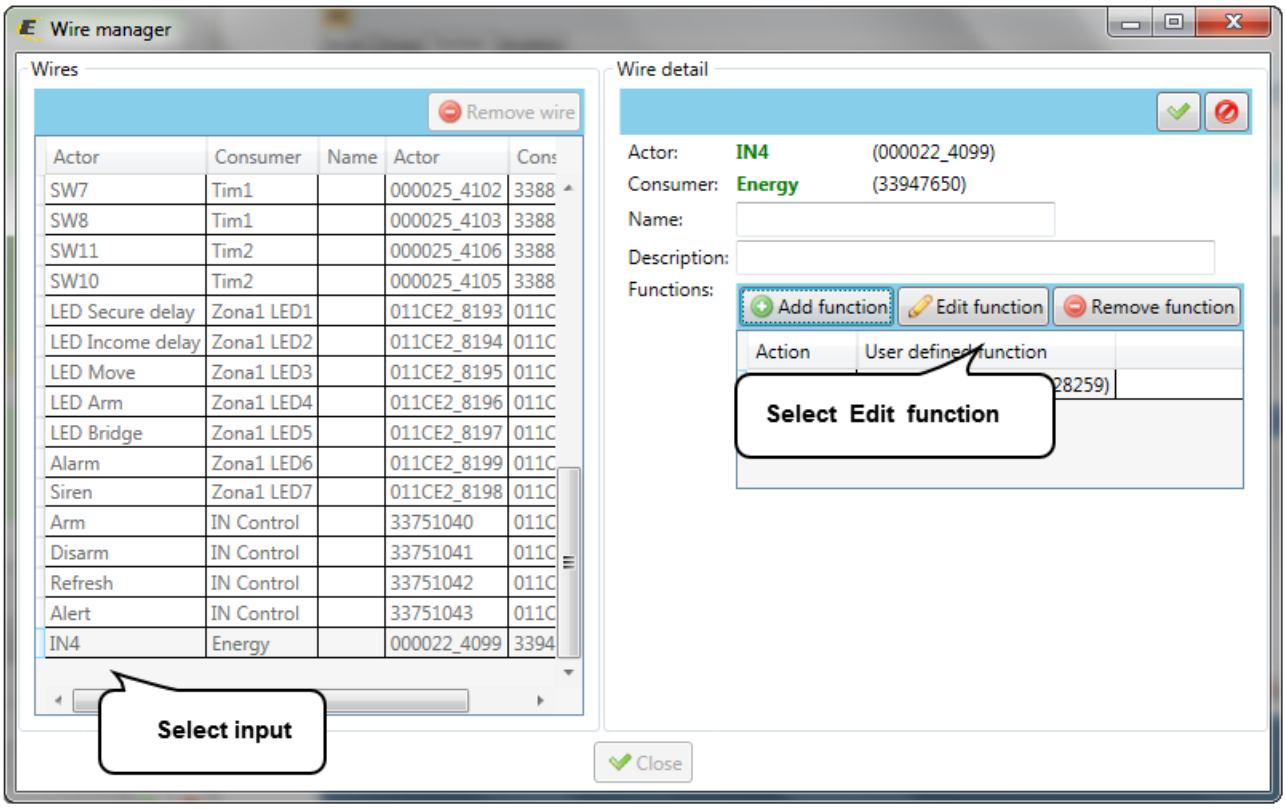


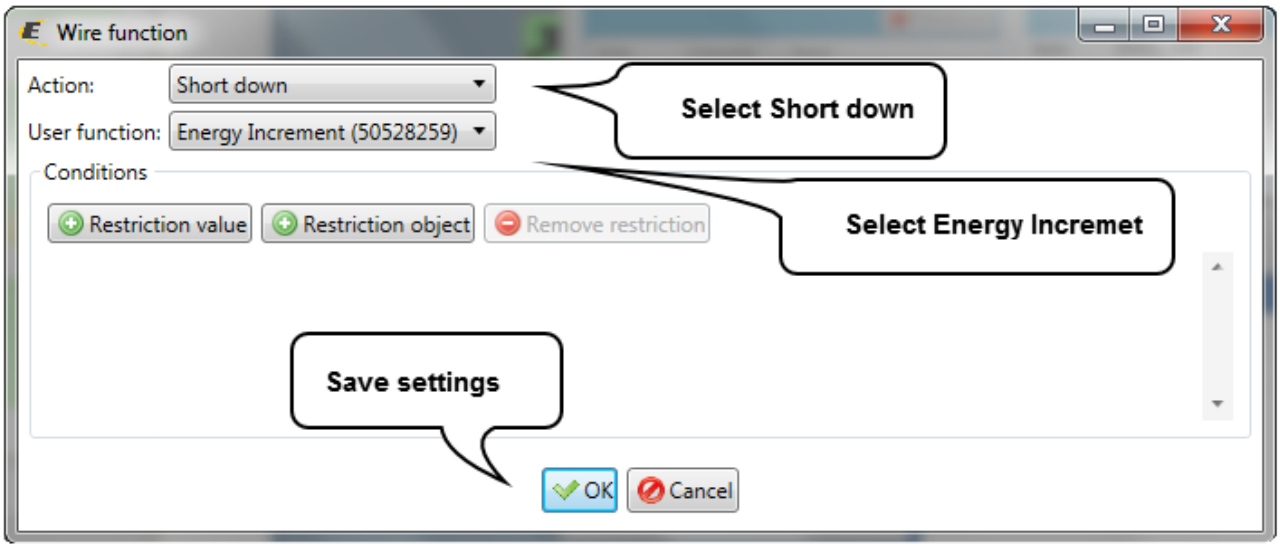

Move the switch and central units to the desktop and double click on switch icon edit and select IN Digital input M3-80B.

In the **Function** tab, select **ADD connections**, make the connection by pulling the wire from the switch icon on the icon and select Central Unit Energy.



In the tab, **Function** select **Wire Manager**, select the input (IN) Energy through button the Edit function to adjust to Action: **Short down** User function: **Energy Increment.**



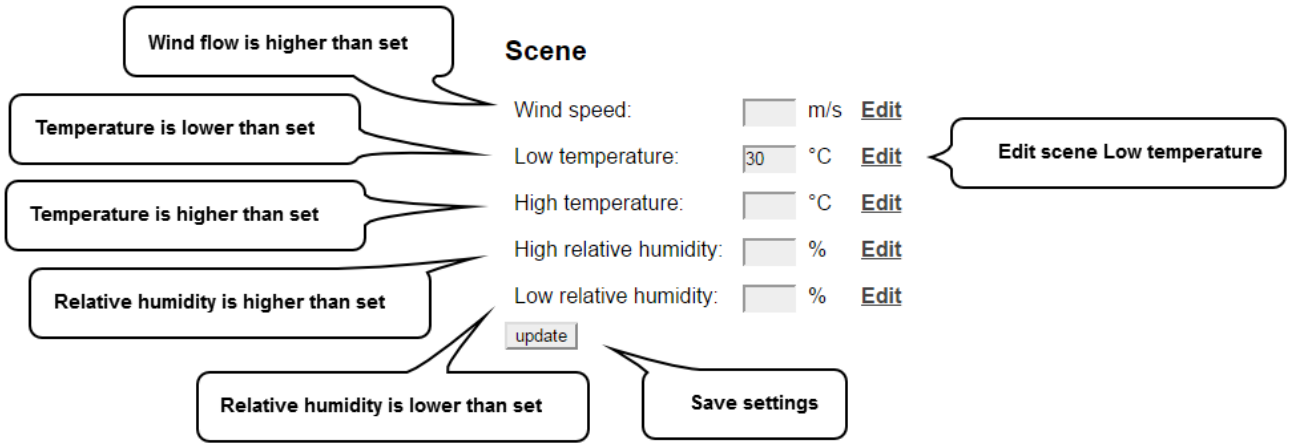

Add the created counter to iMMCC [Energy management]

# Bookmark Giom

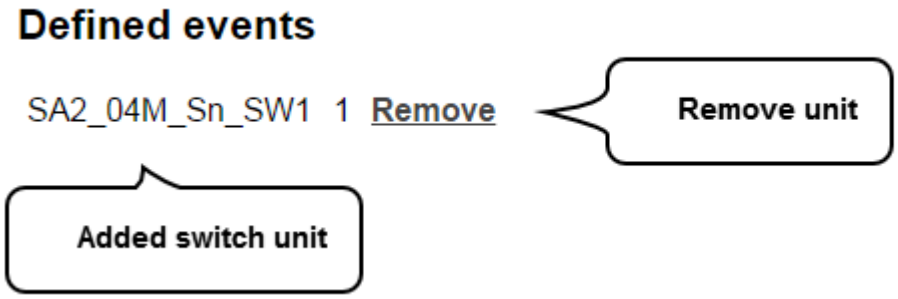
## Scene

In the tab Giom creating scenes based on data from weather stations Giom and their reactions electro installations iNELS.

In the bookmark Giom creating a scene according to data from the weather station call Giom Scene will be activated if selected value is higher or lower then set and assigned to units.


Wind flow is higher than set
Scene
Temperature is lower than set
Wind speed: m/s Edit
Low temperature: 30 °C Edit
Edit scene Low temperature
Temperature is higher than set
High temperature: °C Edit
High relative humidity: % Edit
Relative humidity is higher than set
Low relative humidity: % Edit
update
Relative humidity is lower than set
Save settings

### Edit scene



**Connect Giom station as zone:**

IMM connection with the server is defined in iMMControl Center in the "Zones" where it is necessary to state "Is it Giom?" switch from "no" to "yes".

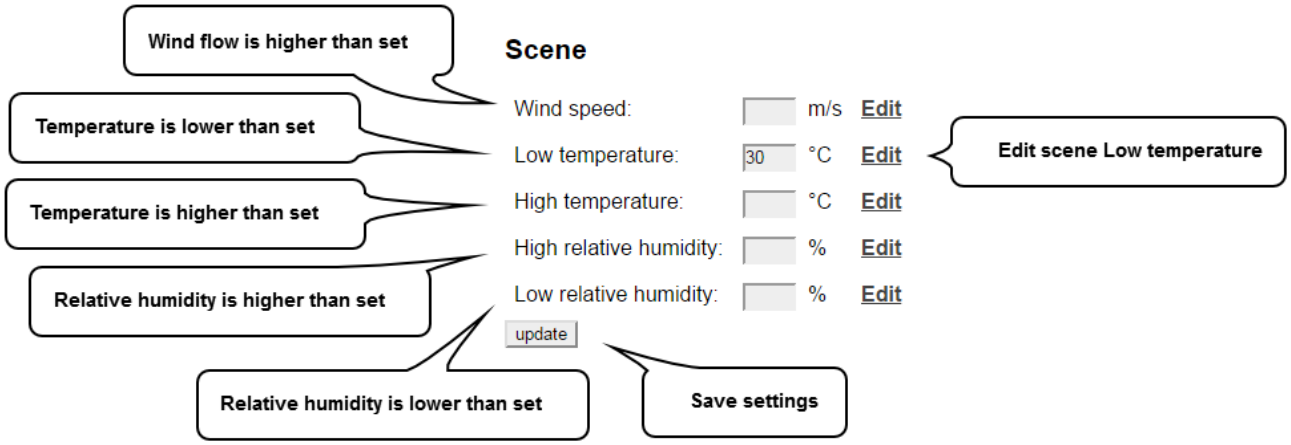
To integrate Meteo Station you need to change its IP address to an address of the given range. Settings can be performed via web interface. Meteo station IP address can be found out using the "Mlocator" software whitch can be downloaded in the manafacture's website: link

**! For proper function you must first set up Giom such a zone.**

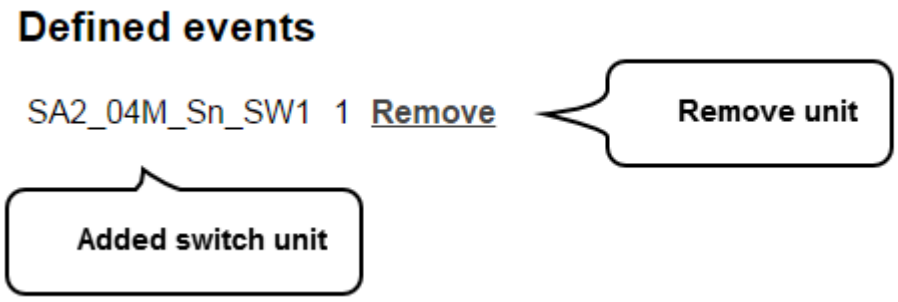
Information from meteo station can by displayed in applications iHC

# Giom Scene

In the bookmark **Giom** creating a scene according to data from the weather station call Giom Scene will be activated if selected value is higher or lower then set and assigned to units.


Wind flow is higher than set
Scene
Temperature is lower than set
Wind speed: m/s Edit
Low temperature: 30 °C Edit
Edit scene Low temperature
Temperature is higher than set
High temperature: °C Edit
High relative humidity: % Edit
Relative humidity is higher than set
Low relative humidity: % Edit
update
Relative humidity is lower than set
Save settings

**Edit scene:**



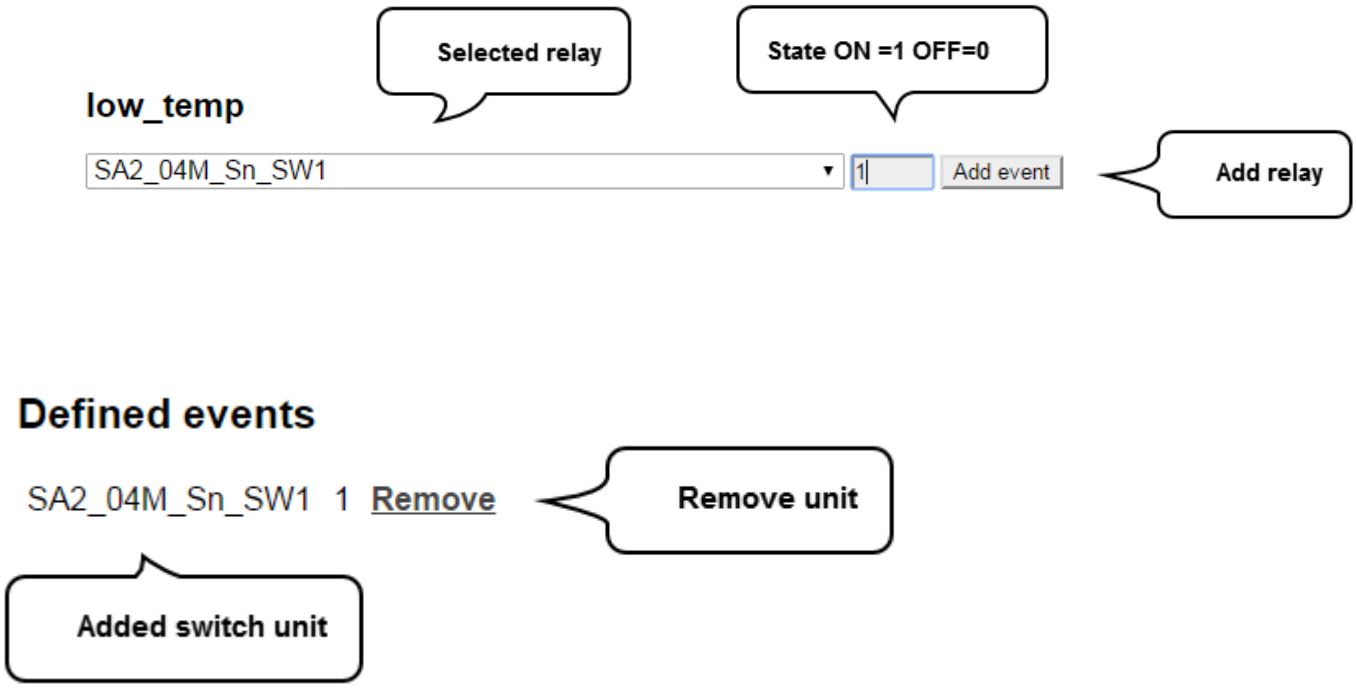

**For proper function you must first set up Giom such a zone.**

Information from meteo station can by displayed in applications iHC

# Edit

**Edit** is used to create or edit scenes. In the selected scene type is possible add or remove relay units.

**Example Edit selected scene:**



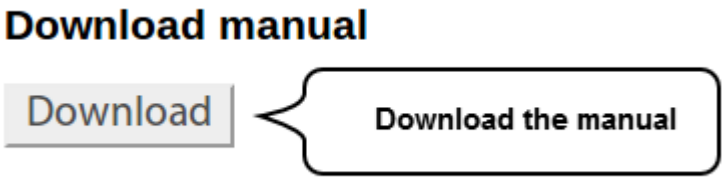
## Bookmark Manual

In bookmark **Manual** is available for download the latest version of the manual in PDF format.

### Download manual

# Download manual

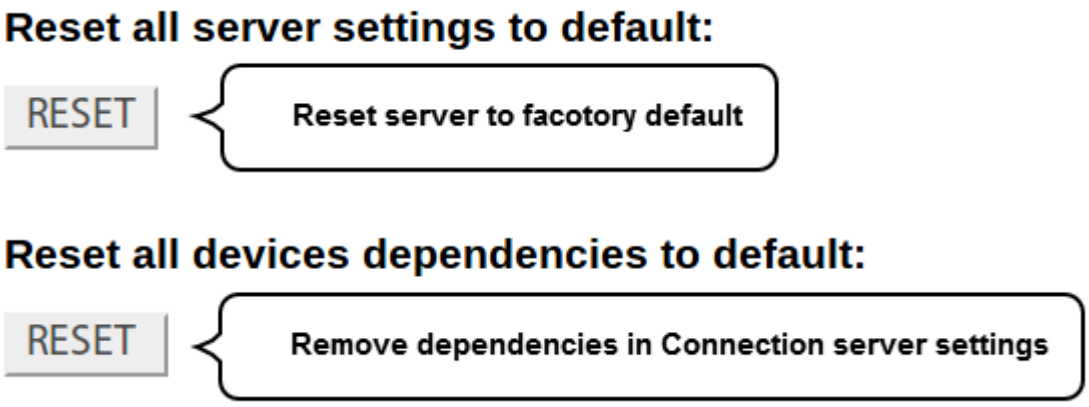
In the section **Download manual** you can download the current version manual for Conncetion server in PDF format.



# Bookmark Default settings

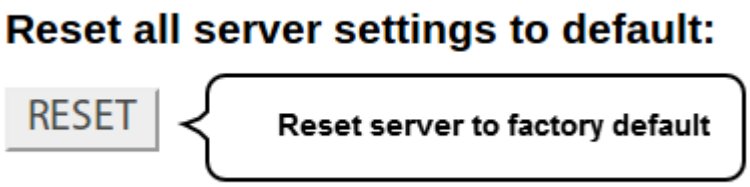
Bookmark **Defualt settings** is used for reset settings to default state. The first option offers is **Reset all clients settings to default** to reset Connection server to factory default ie. remove all users settings.

The second option is **Reset all devices dependencies to default,** whitch only remove users settings related dependencies to other functions Connection server.



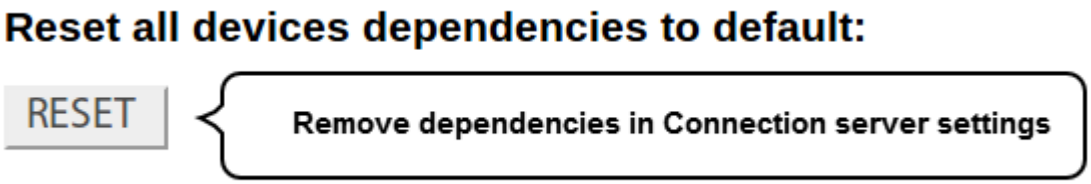
# Reset all server settings to default

**Reset all server settings to defalt** is used to reset Connection server to factory default i.e.that all user settings will be erased.



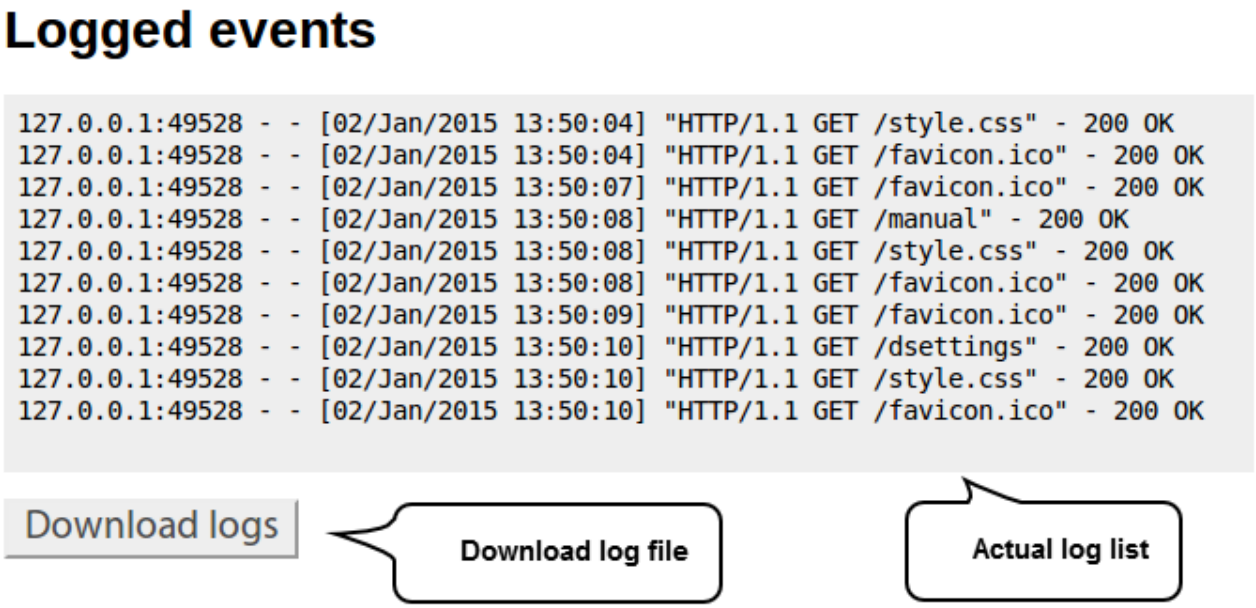
# Reset all devices dependencies to default

Menu **Reset all devices dependencies to default,** remove settings which are depending on other functions Connection server for example relay,air conditiong etc.



# Bookmark Audit

Bookmark **Audit** is used to show and download LOG file option events for diagnostic purposes developer.



# Logged events

Menu **Logged events** is used to show a download LOG option events for diagnostic purposes developer.